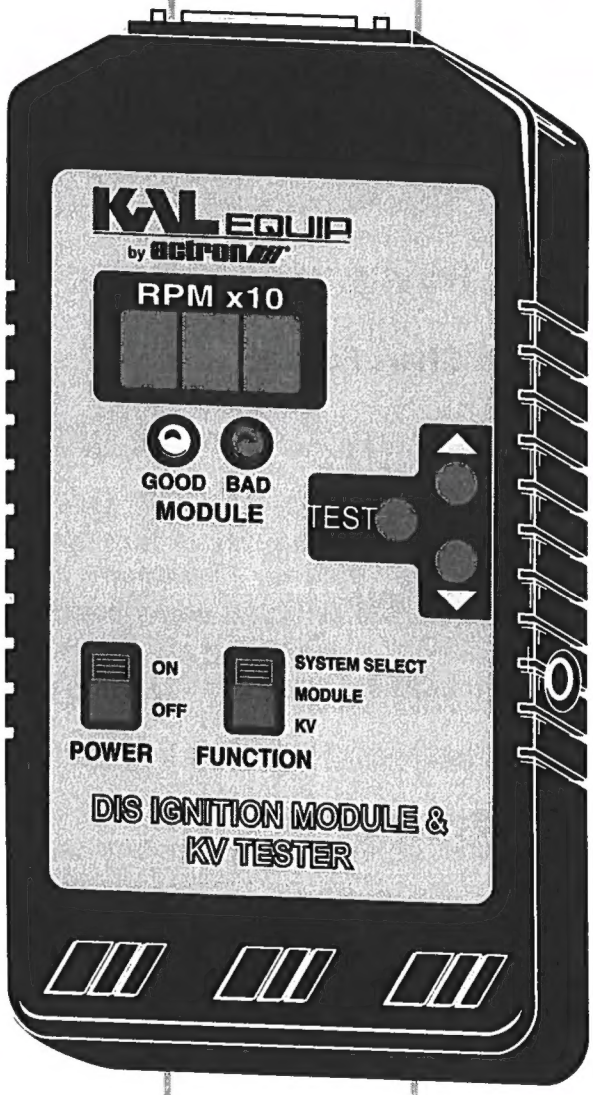
KM2993 DIS Module / KV Tester



KAL EQUIP

Model KM2993 DIS Module/KV Tester

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Vehicle Service Information

The following is a list of publishers who have manuals containing vehicle diagnostic information. Some manuals may be available at auto parts stores or your local public library. For others, you need to write for availability and pricing, specifying the make, model and year of your vehicle.

Vehicle Service Manuals:

Chilton Book Company
Chilton Way
Radnor, PA 19089

Haynes Publications
861 Lawrence Drive
Newbury Park, CA 91320

Mitchell Manuals, Inc.
Post Office Box 26260
San Diego, CA 92126

Motor's Auto Repair Manual
Hearst Company
250 W. 55th Street
New York, NY 10019

Buick, Cadillac, Chevrolet, GEO, GMC, Oldsmobile, Pontiac, Honda, Isuzu, Suzuki, Kia, Hyundai, & Subaru
Helm Incorporated
Post Office Box 07130
Detroit, MI 48207

Saturn
Adistra Corporation
c/o Saturn Publications
101 Union St.
Post Office Box 1000
Plymouth, MI 48170

Ford, Lincoln, & Mercury
Ford Publication Department
Helm Incorporated
P.O. Box 07150
Detroit, MI 48207

Chrysler, Plymouth, Dodge, Jeep, Eagle
Dyment Distribution Service
Service Publications
12200 Alameda Drive
Strongsville, OH 44136

General Safety Precautions to Follow When Working on Vehicles

To prevent accidents that could result in serious injury and/or damage to your vehicle or test equipment, carefully follow these safety rules and test procedures at all times when working on vehicles:

- Always wear approved eye protection.
- Always operate the vehicle in a well-ventilated area. Do not inhale exhaust gases — they are very poisonous!
- Always keep yourself, tools and test equipment away from all moving or hot engine parts.
- Always make sure the vehicle is in **Park** (Automatic transmission) or **neutral** (manual transmission) and that the **parking brake is firmly set.** Block the drive wheels.
- Never lay tools on vehicle battery. You may short the terminals together causing harm to yourself, the tools or the battery.
- Never use tool if its internal circuitry has been exposed to any liquids.
- Never smoke or have open flames near vehicle. Vapors from gasoline and charging battery are highly flammable and explosive.
- Never leave vehicle unattended while running tests.
- Always keep a fire extinguisher suitable for gasoline/electrical/chemical fires handy.
- Always use caution when working around the ignition coil, distributor cap, ignition wires, and spark plugs. These components have **high voltage** when the engine is running.
- When performing a road test, **never** operate the tool alone while driving the vehicle. **Always** have one person drive the vehicle while an assistant operates the tool.
- Always turn ignition key OFF when connecting or disconnecting electrical components, unless otherwise instructed.
- Always follow vehicle manufacturer's warnings, cautions and service procedures.

Section 1: The KM2993 DIS Module/KV Tester

Introduction

In the past several years, many automakers have replaced conventional distributor-type ignition systems with computer-controlled Distributorless Ignition Systems (DIS). DIS generally consists of a triggering sensor used to measure engine speed, an ignition module to interpret the signals generated by the triggering sensor, and the vehicle's Powertrain Control Module or PCM. The PCM and/or the ignition module decide when to fire each spark plug, eliminating the conventional distributor. Distributorless Ignition Systems use several ignition coils, which fire the spark plugs directly based on signals from the ignition module and/or PCM.

The KAL DIS Module/KV Tester model KM2993 is a hand held unit used to test DIS (Distributorless/Direct Ignition Systems) ignition control modules and measure secondary ignition voltage (KV). A GOOD (green) LED and a BAD (red) LED are used to display ignition module test results. A three digit display shows the RPM at which the ignition module is being tested, or the secondary ignition voltage (depending on what function is being selected). The KM2993 will also test some distributor type ignition modules. The tester also stores 12 KV values in memory for comparison purposes.

Review Contents

Please take time and review all important documents enclosed. Be sure to review box for contents.

The Kal2993 DIS Module/KV Tester will have the following items:

1) The DIS Module/KV tester
2) Module Hookup cable
3) Jumper wires
4) KV Clamp
5) Instruction Manual

Tester Features

Model KM2993 DIS Module/KV Tester

1. GOOD MODULE LED:

The GOOD MODULE (green) LED will light if the ignition module tested passes all tests performed.

2. BAD MODULE LED:

The BAD MODULE (red) LED will light if the ignition module tested fails any module tests performed.

3. Power Switch:

The POWER switch is used to turn the tester on and off.

4. FUNCTION Switch:

The Function Switch is used to select the function of the tester. There a three functions of this tester. SYSTEM SELECT function is used to tell the tester what module type is to be tested. The MODULE function is used to test the ignition module. The final function KV allows the tester to measure secondary ignition peak firing voltage. This function also allows you to store and display secondary ignition voltage readings in the testers memory.

5. UP and DOWN Arrows:

The UP and DOWN arrow keys have two differnt uses. When the FUNCTION switch is set to SYSTEM SELECT, the arrow keys are used to scroll through a list of numbers. These numbers correspond to a ignition System Type noted with the Tester/Module connection hookup drawings. Once the largest number is reached, the list will wrap around to the beginning. When the function switch is set to KV, the arrow keys are used to select memory positions for retrieval and storage of KV values from the 12 memory positions.

6. TEST Key:

The TEST key also has two different uses. When the FUNCTION switch is set to MODULE, the TEST key is used to begin testing of a ignition module. The TEST key will not start module testing unless you have selected a system type. When the function switch is in the KV position, the TEST key will store the current real-time secondary ignition voltage reading in the current memory location.

7. 3 Digit Display:

During system select function the display is used to show the System Type number. The module test function uses the display to show the current test RPM the ignition module is being checked at. Real-time KV measurements or ones from memory are shown on the display when the KV function is selected. Memory location, 1 through 12, will also be indicated on the display during the KV function.

8. Battery Cable:

Used to connect the tester to the car battery.

9. KV Cable & Clamp:

Used to measure the ignition's secondary voltage. The clamp allows the tester to the vehicle spark plug wires for secondary ignition voltage measurements. The KV cable clamp goes around the spark plug wire during testing.

10. KV Jack:

This jack is used to connect the KV cable to the tester.

11. Module Testing Cable:

The module testing cable is used to connect the tester to the ignition modules.

12. Jumper Wires:

Jumper wires may used to make it easier to connect the ignition module to the Module Testing Cable.

Section 2: Ignition Module Testing

1.) Disconnect all wiring harnesses from ignition module.
The ignition module must be completely isolated from vehicle's wiring for testing. If the coil/s attach to the module directly they will also have to be removed for testing.

2.) Connect Module Testing Cable to ignition module.
Tester leads are color-coded to aid in connecting to the ignition module. Refer to application charts for correct System Name on DIS ignitions, then use the Tester / Module Connections section of this manual for connection diagrams. If you are testing a distributed ignition system, refer to the appropriate ignition system type section in Tester / Module Connections section and find the module type use are testing.

Caution: If module is hooked up incorrectly bad test results will occur, possibly causing replace of good parts.

On some cars, the ignition module may have to be removed from the vehicle to be connected to tester. This will not affect test results. Refer to service manual for correct removal/installation procedures.

WARNING: Make sure the unused leads on the Module Testing Cable do not come in contact with power, ground or each other. This may cause damage to the tester.

3.) Connect DIS Module/KV Tester to vehicle battery.
Be sure power switch is in OFF position to prevent possible damage to the ignition module. Connect battery clips to the vehicle battery: RED to the positive (+) terminal and BLACK to a good vehicle ground or battery's negative (-) terminal.

4.) Move POWER switch to ON position.
Tester will perform a self-test on itself. During the self-test the GOOD and BAD MODULE LEDs will turn on briefly. The three digit display will show "88.8" briefly to indicate displays are functioning properly.

5.) Check the ignition module's Power pins.
With a multimeter measure the voltage between the Black and Red test clips. Read and note the voltage. Now measure from the Black test clip to all the pins on the module holdup drawing marked PWR. These readings should be with a couple volts of the first reading. If voltage readings are not similar their is a problem in the ignition control module, consider it a bad module. Not all modules will have **PWR** pins to be tested.

6.) Check the ignition's module Ground pins.
Turn the tester off. With a multimeter check the continuity from the Black test clip to all pins on the module hookup drawing marked GND. All readings should be less than 5 ohms. If any reading is higher than 5 ohms the module is bad. Not all modules will have **GND** pins to be tested.

7.) Place FUNCTION switch in the SYSTEM SELECT position. System select allows you to select which ignition module type is to be tested. Refer to Tester/Module Connections illustrations for proper System Type numbers.
Use the UP and DOWN arrow keys to select the system being tested. The system type codes are shown on the 3-Digit Display. Use the up and down arrow keys to select the appropriate system type code. Once the correct system is shown on the 3-Digit Display, move the FUNCTION switch to the MODULE position.

8.) Press the TEST key to begin testing.
The tester will test the ignition module in a number of different RPM ranges. The 3-Digit Display will show current test RPM. **NOTE:** The displayed number is RPM divided by 10. To get actual test RPM multiply displayed number by 10. For example, a display of 150 indicates a test speed of 1500 RPM.

9.) When testing is complete,
the results of the test are shown by the GOOD and BAD MODULE LEDs. GOOD: GOOD (green) LED indicates ignition module is functioning properly. **BAD:** BAD (red) LED indicates a malfunctioning ignition module which should be replaced.
If you get a BAD LED double check that the right System Type and hookup was used during testing.

10.) Testing is complete.
Move POWER switch to OFF. Remove all connections to ignition module. Replace ignition module if necessary. Reinstall ignition module (if removed) and reconnect ignition module wiring harnesses.

System Selection Application Charts

GENERAL MOTORS DIS IGNITION APPLICATION

Buick

Model	Engine Application	Engine Code	Model Years	System Type
Century	2.2L	4	96-94	GM DIS/IDIS 4 Cyl
Century	2.5L	R	92-87	GM DIS/IDIS 4 Cyl
Century	2.8L	W	89-87	GM DIS 6 Cyl
Century	3.1L	M	96-94	GM DIS 6 Cyl
Century	3.3L	N	92-89	GM 3.0/3.3L Buick
Century	3.3L	N	93	GM 3.8L C3I (Fast Start)
Century	3.8L Delco Type I	3	88-86	GM 3.0/3.3L Buick
Century	3.8L Magnavox	3	88-86	GM 3.8L C3I
Electra	3.8L	C	91-88	GM 3.8L C3I (Fast Start)
Electra	3.8L Delco Type I	3	88-86	GM 3.0/3.3L Buick
Electra	3.8L Delco Type I	B	86	GM 3.0/3.3L Buick
Electra	3.8L Magnavox	3	88-86	GM 3.8L C3I
Electra	3.8L Magnavox Type I	B	86	GM 3.8L C3I
LeSabre	3.0L Module # 25520266, 25523220, 25521351	L	86	GM 3.8L C3I
LeSabre	3.8L	C	91-88	GM 3.8L C3I (Fast Start)
LeSabre	3.8L	L	95-92	GM 3.8L C3I (Fast Start)
LeSabre	3.8L Delco Type I	3	88-86	GM 3.0/3.3L Buick
LeSabre	3.8L Magnavox	3	88-86	GM 3.8L C3I
Park Avenue	3.8L	1	96-95	GM 3.8L C3I (Fast Start)
Park Avenue	3.8L	1	92-91	GM 3.8L C3I (Fast Start)
Park Avenue	3.8L	C	91-88	GM 3.8L C3I (Fast Start)
Park Avenue	3.8L	K	96-95	GM 3.8L C3I (Fast Start)
Park Avenue	3.8L	L	94-92	GM 3.8L C3I (Fast Start)
Park Avenue	3.8L Magnavox	1	92-91	GM 3.8L C3I (Fast Start)
Reatta	3.8L	C	91-88	GM 3.8L C3I (Fast Start)
Reatta	3.8L	L	91	GM 3.8L C3I (Fast Start)
Regal	2.8L	W	89-87	GM DIS 6 Cyl
Regal	3.0L Module # 25520266, 25523220	L	85	GM 3.8L C3I
Regal	3.1L	M	96-94	GM DIS 6 Cyl
Regal	3.1L	T	93-89	GM DIS 6 Cyl
Regal	3.8L	K	96	GM 3.8L C3I (Fast Start)
Regal	3.8L	L	95-90	GM 3.8L C3I (Fast Start)
Regal	3.8L Magnavox Type I	7	87-86	GM 3.8L C3I
Riviera	3.8L Delco Type I	B	86	GM 3.0/3.3L Buick
Riviera	3.8L Magnavox Type I	B	86	GM 3.8L C3I
Riviera	3.8L	1	95	GM 3.8L C3I (Fast Start)
Riviera	3.8L	C	91-88	GM 3.8L C3I (Fast Start)
Riviera	3.8L	K	96-95	GM 3.8L C3I (Fast Start)
Riviera	3.8L	L	92-91	GM 3.8L C3I (Fast Start)
Riviera	3.8L Delco Type I	3	88-86	GM 3.0/3.3L Buick
Riviera	3.8L Magnavox	3	88-86	GM 3.8L C3I
Skylark	3.0L Module # 25520266, 25523220	L	86	GM 3.8L C3I

Model	Engine Application	Engine Code	Model Years	System Type
Skyhawk	2.0L	1	89-87	GM DIS/IDIS 4 Cyl
Skylark	2.3L	3	94-92	GM DIS/IDIS 4 Cyl
Skylark	2.3L	D	91-88	GM DIS/IDIS 4 Cyl
Skylark	2.3L	D	95	GM DIS/IDIS 4 Cyl
Skylark	2.4L	T	96	GM DIS/IDIS 4 Cyl
Skylark	2.5L	U	91-87	GM DIS/IDIS 4 Cyl
Skylark	3.0L Module # 25521351	L	88-86	GM 3.8L C3I
Skylark	3.1L	M	96-94	GM DIS 6 Cyl
Skylark	3.3L	N	92-89	GM 3.0/3.3L Buick
Skylark	3.3L	N	93	GM 3.8L C3I (Fast Start)
Somerset	2.5L	U	91-87	GM DIS/IDIS 4 Cyl
Somerset	3.0L Module # 25520266, 25523220, 25521351	L	88-86	GM 3.8L C3I

Chevrolet

Model	Engine Application	Engine Code	Model Years	System Type
Beretta	2.0L	1	89-87	GM DIS/IDIS 4 Cyl
Beretta	2.2L	4	93-92	GM DIS/IDIS 4 Cyl
Beretta	2.2L	4	95-94	GM DIS/IDIS 4 Cyl
Beretta	2.2L	G	91-90	GM DIS/IDIS 4 Cyl
Beretta	2.3L	A	91-90	GM DIS/IDIS 4 Cyl
Beretta	2.3L	A	94-92	GM DIS/IDIS 4 Cyl
Beretta	2.4L	4	96	GM DIS/IDIS 4 Cyl
Beretta	2.8L	W	89-87	GM DIS 6 Cyl
Beretta	3.1L	M	96-94	GM DIS 6 Cyl
Beretta	3.1L	T	93-90	GM DIS 6 Cyl
Camaro	3.4L	S	95-93	GM DIS 6 Cyl
Camaro	3.8L	K	96-95	GM 3.8L C3I (Fast Start)
Cavalier	2.0L	1	89-87	GM DIS/IDIS 4 Cyl
Cavalier	2.2L	4	93-92	GM DIS/IDIS 4 Cyl
Cavalier	2.2L	4	95-94	GM DIS/IDIS 4 Cyl
Cavalier	2.2L	G	91-90	GM DIS/IDIS 4 Cyl
Cavalier	2.3L	D	95	GM DIS/IDIS 4 Cyl
Cavalier	2.4L	4	96	GM DIS/IDIS 4 Cyl
Cavalier	2.4L	T	96	GM DIS/IDIS 4 Cyl
Cavalier	2.8L	W	89-87	GM DIS 6 Cyl
Cavalier	3.1L	T	94-90	GM DIS 6 Cyl
Celebrity	2.5L	R	90-87	GM DIS/IDIS 4 Cyl
Celebrity	2.8L	W	89-87	GM DIS 6 Cyl
Celebrity	3.1L	T	94-90	GM DIS 6 Cyl
Corsica	2.0L	1	89-87	GM DIS/IDIS 4 Cyl
Corsica	2.2L	4	93-92	GM DIS/IDIS 4 Cyl
Corsica	2.2L	4	95-94	GM DIS/IDIS 4 Cyl
Corsica	2.2L	G	91-90	GM DIS/IDIS 4 Cyl
Corsica	2.3L	A	94-92	GM DIS/IDIS 4 Cyl
Corsica	2.4L	4	96	GM DIS/IDIS 4 Cyl
Corsica	2.8L	W	89-87	GM DIS 6 Cyl
Corsica	3.1L	M	96-94	GM DIS 6 Cyl
Corsica	3.1L	T	93-90	GM DIS 6 Cyl
Lumina	2.5L	R	92-90	GM DIS/IDIS 4 Cyl

Model	Engine Application	Engine Code	Model Years	System Type
Lumina	3.1L	M	95	GM DIS 6 Cyl
Lumina	3.1L	T	94-90	GM DIS 6 Cyl
Lumina	3.1L	W	93	GM DIS 6 Cyl
Lumina	3.4L	X	95-91	GM DIS 6 Cyl
Lumina APV	3.8L	L	92	GM 3.8L C3I (Fast Start)
Lumina APV	3.8L	L	95-94	GM 3.8L C3I (Fast Start)
Lumina APV	3.8L Module 1103911	L	93	GM 3.8L C3I (Fast Start)
Lumina APV	3.8L Module 1103936	L	93	GM 3.8L C3I (Fast Start)
Monte Carlo	3.1L	M	95	GM DIS 6 Cyl
Monte Carlo	3.4L	X	95	GM DIS 6 Cyl

Cadillac

Model	Engine Application	Engine Code	Model Years	System Type
All	2.8L	W	88-87	GM DIS 6 Cyl
Deville	4.6L Distributorless	9, Y	96-94	GM 8 Cyl. North Star
Deville Concours	4.6L Distributorless	9, Y	96-93	GM 8 Cyl. North Star
Eldorado	4.6L Distributorless	9, Y	96-93	GM 8 Cyl. North Star
Seville	4.6L Distributorless	9, Y	96-93	GM 8 Cyl. North Star

Oldsmobile

Model	Engine Application	Engine Code	Model Years	System Type
88 Royale	3.8L	K	96-95	GM 3.8L C3I (Fast Start)
88 Royale	3.8L	L	94-92	GM 3.8L C3I (Fast Start)
88 Royale	3.8L Magnavox Module	L	92	GM 3.8L C3I (Fast Start)
98 Regency	3.8L	1	95-92	GM 3.8L C3I (Fast Start)
98 Regency	3.8L	K	96-95	GM 3.8L C3I (Fast Start)
98 Regency	3.8L	L	94-92	GM 3.8L C3I (Fast Start)
98 Regency	3.8L Magnavox Module	L	92	GM 3.8L C3I (Fast Start)
Achieva	2.3L	A, D, 3	94-92	GM DIS/IDIS 4 Cyl
Achieva	2.3L	D	95	GM DIS/IDIS 4 Cyl
Achieva	2.4L	T	96	GM DIS/IDIS 4 Cyl
Achieva	3.1L	M	96-94	GM DIS 6 Cyl
Achieva	3.3L Module # 1103911	N	93	GM 3.8L C3I (Fast Start)
Achieva	3.3L Module # 1103936	N	93	GM 3.8L C3I (Fast Start)
All	2.0L	1	88-87	GM DIS/IDIS 4 Cyl
All	2.3L	A, D	91-87	GM DIS/IDIS 4 Cyl
All	2.5L	R	92-87	GM DIS/IDIS 4 Cyl
All	2.5L	U	91-87	GM DIS/IDIS 4 Cyl
All	2.8L	W	89-88	GM DIS 6 Cyl
All	3.0L Module # 25520266, 25523220, 25521351	L	86-85	GM 3.8L C3I
All	3.1L	T	93-90	GM DIS 6 Cyl
All	3.3L	N	92-89	GM 3.0/3.3L Buick
All	3.8L	C	91-88	GM 3.8L C3I (Fast Start)
All	3.8L Delco Type I	3	88-87	GM 3.0/3.3L Buick
All	3.8L Delco Type I	3, B	86	GM 3.0/3.3L Buick

Model	Engine Application	Engine Code	Model Years	System Type
All	3.8L Magnavox Type module	3, B	88-86	GM 3.8L C3I
Aurora	4.0L	C	96-95	GM 8 Cyl. North Star
Cultass Cruiser	3.1L	M	95	GM DIS 6 Cyl
Cutlass	3.1L	M	96	GM DIS 6 Cyl
Cutlass	3.4L	X	96-94	GM DIS 6 Cyl
Cutlass Ciera	2.2L	4	96-93	GM DIS/IDIS 4 Cyl
Cutlass Ciera	2.8L	W	87	GM DIS 6 Cyl
Cutlass Ciera	3.1L	M	96-94	GM DIS 6 Cyl
Cutlass Ciera	3.3L	N	93	GM 3.8L C3I (Fast Start)
Cutlass Supreme	3.1L	M	95-93	GM DIS 6 Cyl
Cutlass Supreme	3.4L	X	95-90	GM DIS 6 Cyl
Firenza	2.8L	W	87	GM DIS 6 Cyl
Ninety-Eight	3.8L	L	91	GM 3.8L C3I (Fast Start)
Silhouette	2.3L Export	D	96-93	GM DIS/IDIS 4 Cyl
Silhouette	3.8L	L	92	GM 3.8L C3I (Fast Start)
Silhouette	3.8L	L	95-94	GM 3.8L C3I (Fast Start)
Silhouette	3.8L Module # 1103911	N	93	GM 3.8L C3I (Fast Start)
Silhouette	3.8L Module # 1103936	L	93	GM 3.8L C3I (Fast Start)
Silhouette	3.4L	E	96	GM DIS 6 Cyl
Toronado	3.8L	L	92-91	GM 3.8L C3I (Fast Start)

Pontiac

Model	Engine Application	Engine Code	Model Years	System Type
6000	3.1L	T, V	93-88	GM DIS 6 Cyl
All	2.3L	A, D	89-87	GM DIS/IDIS 4 Cyl
All	2.5L	R	90-87	GM DIS/IDIS 4 Cyl
All	2.5L	U	91-87	GM DIS/IDIS 4 Cyl
All	2.8L	W	89-87	GM DIS 6 Cyl
All	3.0L Magnavox # 25520266, 25523220	L	86-85	GM 3.8L C3I
All	3.0L Magnavox # 2552135, 25526449	L	87-86	GM 3.8L C3I
All	3.8L Magnavox Type I	3	88-87	GM 3.8L C3I
All	3.8L w/Delco Type I	3	88-87	GM 3.0/3.3L Buick
Bonneville	3.8L	1	96-93	GM 3.8L C3I (Fast Start)
Bonneville	3.8L	C	91-88	GM 3.8L C3I (Fast Start)
Bonneville	3.8L	K	96-95	GM 3.8L C3I (Fast Start)
Bonneville	3.8L	L	95-93	GM 3.8L C3I (Fast Start)
Bonneville	3.8L Delco Module	L, 1	92	GM 3.8L C3I (Fast Start)
Bonneville	3.8L Magnavox Module	L, 1	92	GM 3.8L C3I (Fast Start)
Bonneville	3.8L Module # 1103911	L, 1	92	GM 3.8L C3I (Fast Start)
Bonneville	3.8L Module # 1103936	L, 1	92	GM 3.8L C3I (Fast Start)
Firebird	3.4L	S	95-93	GM DIS 6 Cyl
Firebird	3.8L	K	96-95	GM 3.8L C3I (Fast Start)
Grand Am	2.3L	3, A, D	94-90	GM DIS/IDIS 4 Cyl

Model	Engine Application	Engine Code	Model Years	System Type
Grand Am	2.3L	D	95	GM DIS/IDIS 4 Cyl
Grand Am	2.4L	T	96	GM DIS/IDIS 4 Cyl
Grand Am	3.1L	M	96-94	GM DIS 6 Cyl
Grand Am	3.1L	M	93	GM 3.8L C3I (Fast Start)
Grand Am	3.3L	N	92	GM 3.0/3.3L Buick
Grand Am	3.3L Module # 1103911	N	93	GM 3.8L C3I (Fast Start)
Grand Am	3.3L Module # 1103936	N	93	GM 3.8L C3I (Fast Start)
Grand Prix	3.1L	M	96-94	GM DIS 6 Cyl
Grand Prix	3.1L	T, V	93-88	GM DIS 6 Cyl
Grand Prix	3.4L	X	96-91	GM DIS 6 Cyl
Sunbird	3.1L	T	93-91	GM DIS 6 Cyl
Sunfire	2.3L	D	95	GM DIS/IDIS 4 Cyl
Sunfire	2.4L	4	96-95	GM DIS/IDIS 4 Cyl
Sunfire	2.4L	T	96	GM DIS/IDIS 4 Cyl
Tempest	2.2L Canada	G	91-90	GM DIS/IDIS 4 Cyl
Trans Sport	3.4L	E	96	GM DIS 6 Cyl
Trans Sport	3.8L	L	95-94	GM 3.8L C3I (Fast Start)
Trans Sport	3.8L Module # 1103911	L	93	GM 3.8L C3I (Fast Start)
Trans Sport	3.8L Module # 1103936	L	93	GM 3.8L C3I (Fast Start)

Saturn

Engine Model	Engine Application	Model Code	System Years	Type #
Saturn	1.9L	7	95-92	**GM DIS/IDIS 4 Cyl**
Saturn	1.9L	9	95-92	**GM DIS/IDIS 4 Cyl**

FORD DIS IGNITION APPLICATION LIST

Ford

Model	Engine Application	Model Years	System Type #
Contour	2.0L	95-96	Ford EDIS 4 Cyl
Contour	2.5L	95-96	Ford EDIS 4 Cyl
Crown Victoria	4.6L	91-96	Ford EDIS 8 Cy
Escort	1.9L	91-96	Ford EDIS 4 Cyl
Mustang	2.3L OHC Dual Plug	91-94	Ford DIS 4 Cyl Dual Plug
Mustang	3.8L	94-96	Ford EDIS 6 Cyl
Taurus	3.0L SHO	89-95	Ford DIS 6 Cyl
Taurus	3.2L SHO	93-95	Ford DIS 6 Cyl
Taurus	3.0L Flex Fuel	93-95	Ford EDIS 6 Cyl
Thunderbird	3.8L Calif.	94-95	Ford EDIS 6 Cyl
Thunderbird	3.8L Superchargded	89-93	Ford DIS 6 Cyl
Thunderbird	3.8L Superchargded	94-95	Ford EDIS 6 Cyl
Thunderbird	4.6L	94-96	10

Lincoln

Model	Engine Application	Model Years	System Type #
Mark VIII	4.6L 4 valve	93-96	Ford EDIS 8 Cy
Town Car	4.6L	91-96	Ford EDIS 8 Cy

Mercury

Model	Engine Application	Model Years	System Type #
Cougar	3.8L Calif.	94	Ford EDIS 6 Cyl
Cougar	3.8L Superchargded	89-93	Ford DIS 6 Cyl
Cougar	3.8L Superchargded	94-95	Ford EDIS 6 Cyl
Cougar	4.6L	94-96	Ford EDIS 8 Cy
Grand Marquis	4.6L	91-96	Ford EDIS 8 Cy
Mystique	2.0L	95-96	Ford EDIS 4 Cyl
Mystique	2.5L	95-96	Ford EDIS 4 Cyl
Sable	3.0L Flex Fuel	93-95	Ford EDIS 6 Cyl
Tracer	1.9L	91-96	Ford EDIS 4 Cyl

Truck

Model	Engine Application	Model Years	System Type #
Explorer	4.0L	90-94	Ford EDIS 6 Cyl
Ranger	2.3L OHC Dual Plug	89-94	Ford DIS 4 Cyl Dual Plug
Ranger	4.0L	90-94	Ford EDIS 6 Cyl

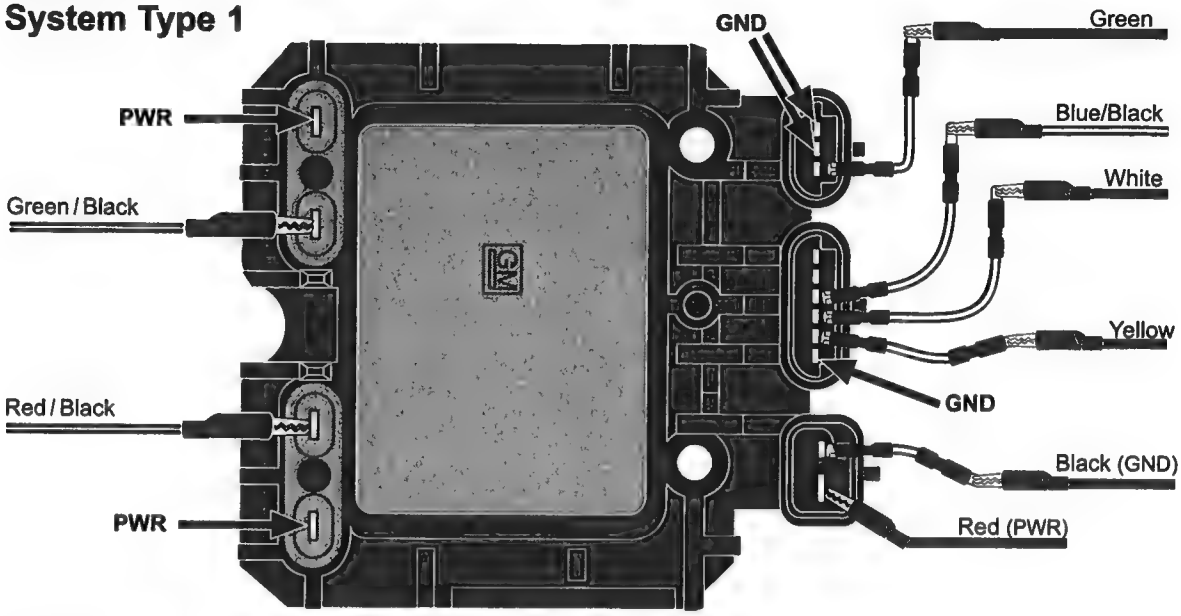
Tester / Module Connections

CAUTION: The metal case on certain ignition modules is connected to the ground (GND) circuit. DO NOT allow any leads or jumpers to touch the metal case. This could cause damage to the module or the tester.

General Motors Systems

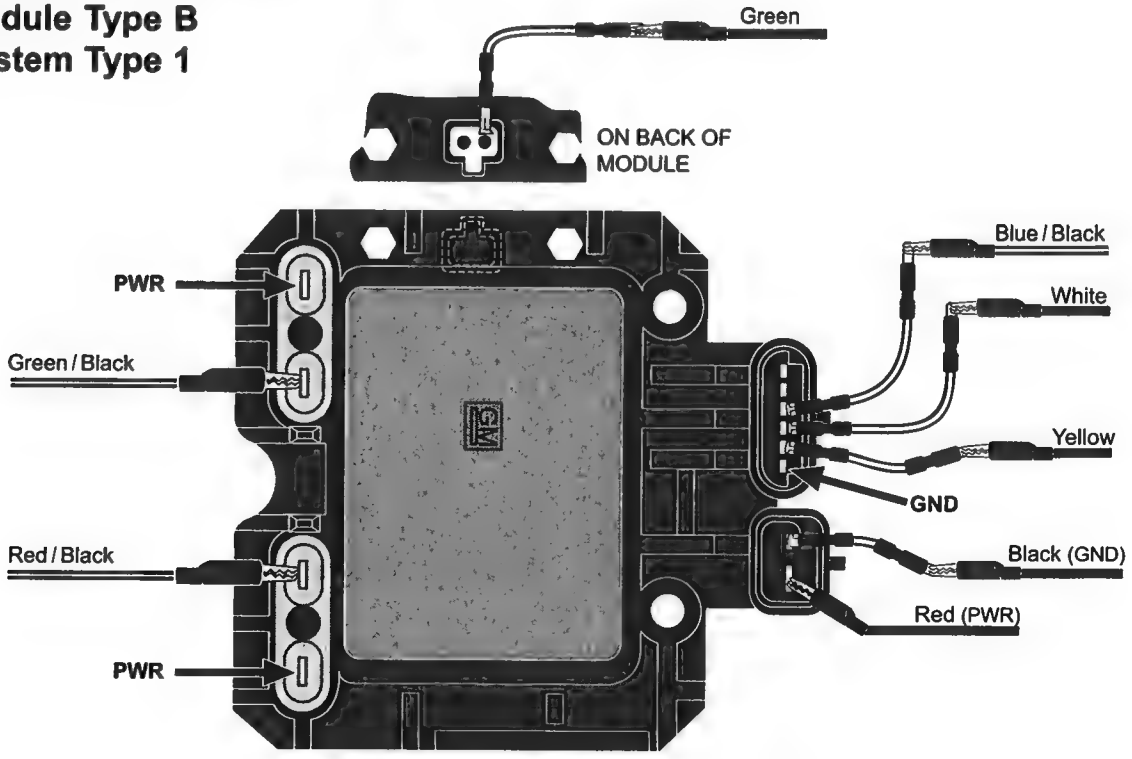
GM DIS/IDIS 4 Cyl

Module Type A
System Type 1



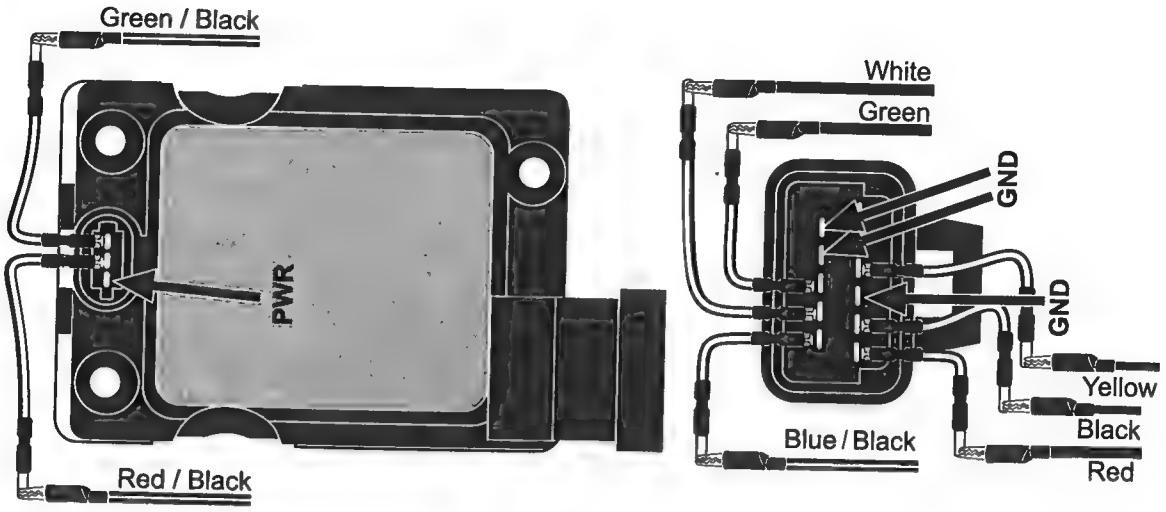
GM DIS/IDIS 4 Cyl

Module Type B
System Type 1



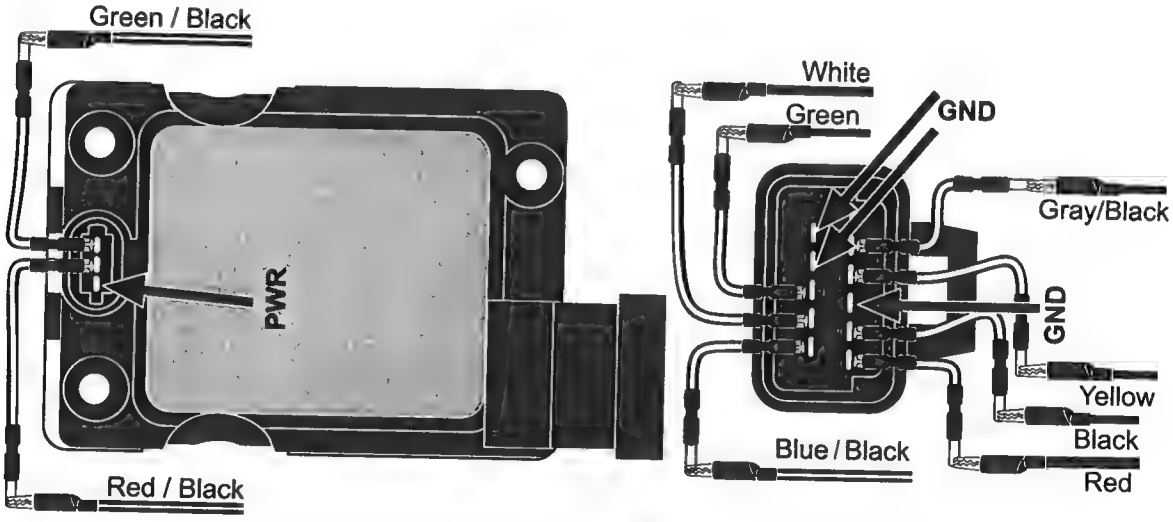
GM DIS/IDIS 4 Cyl

Module Type C -- 88 Buick & Pontiac, 87-88 Olds
System Type 1

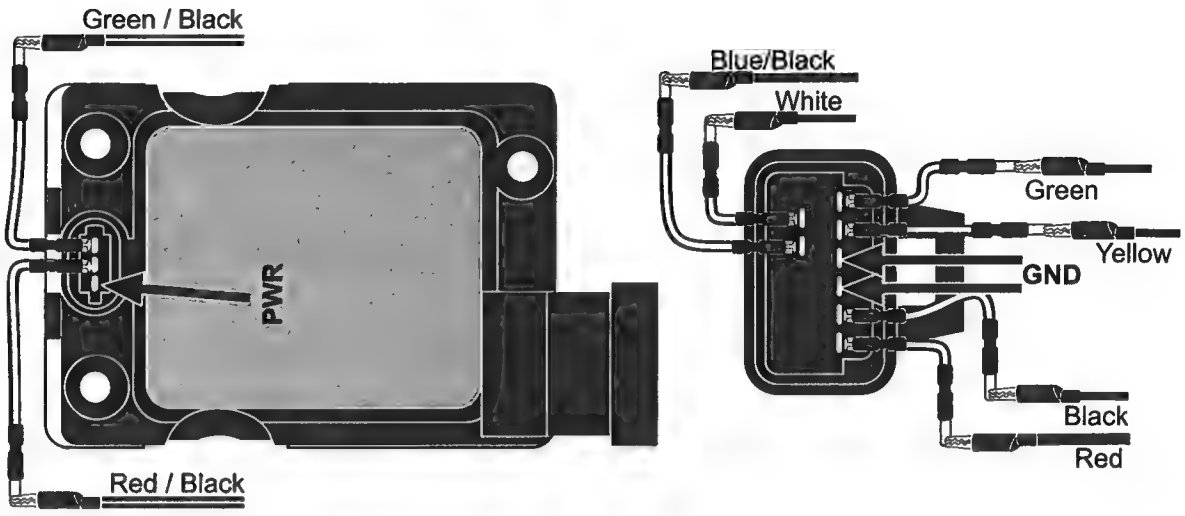


GM DIS/IDIS 4 Cyl

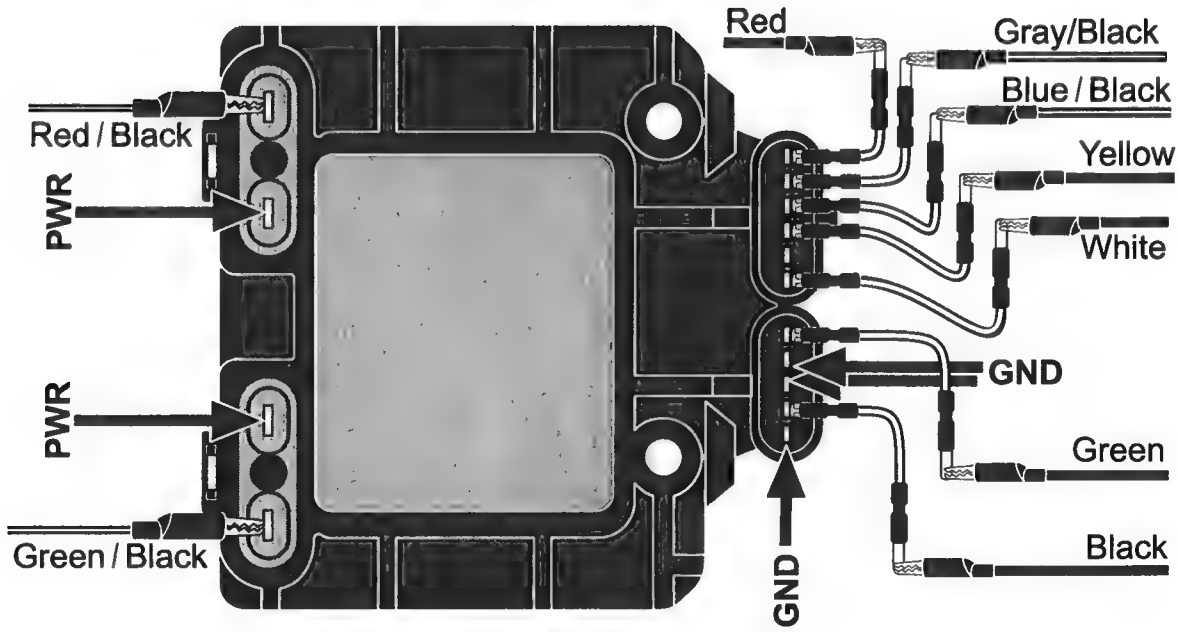
Module Type C -- 89-92 Buick, Olds, Pontiac, 92-90 Chevy
System Type 24



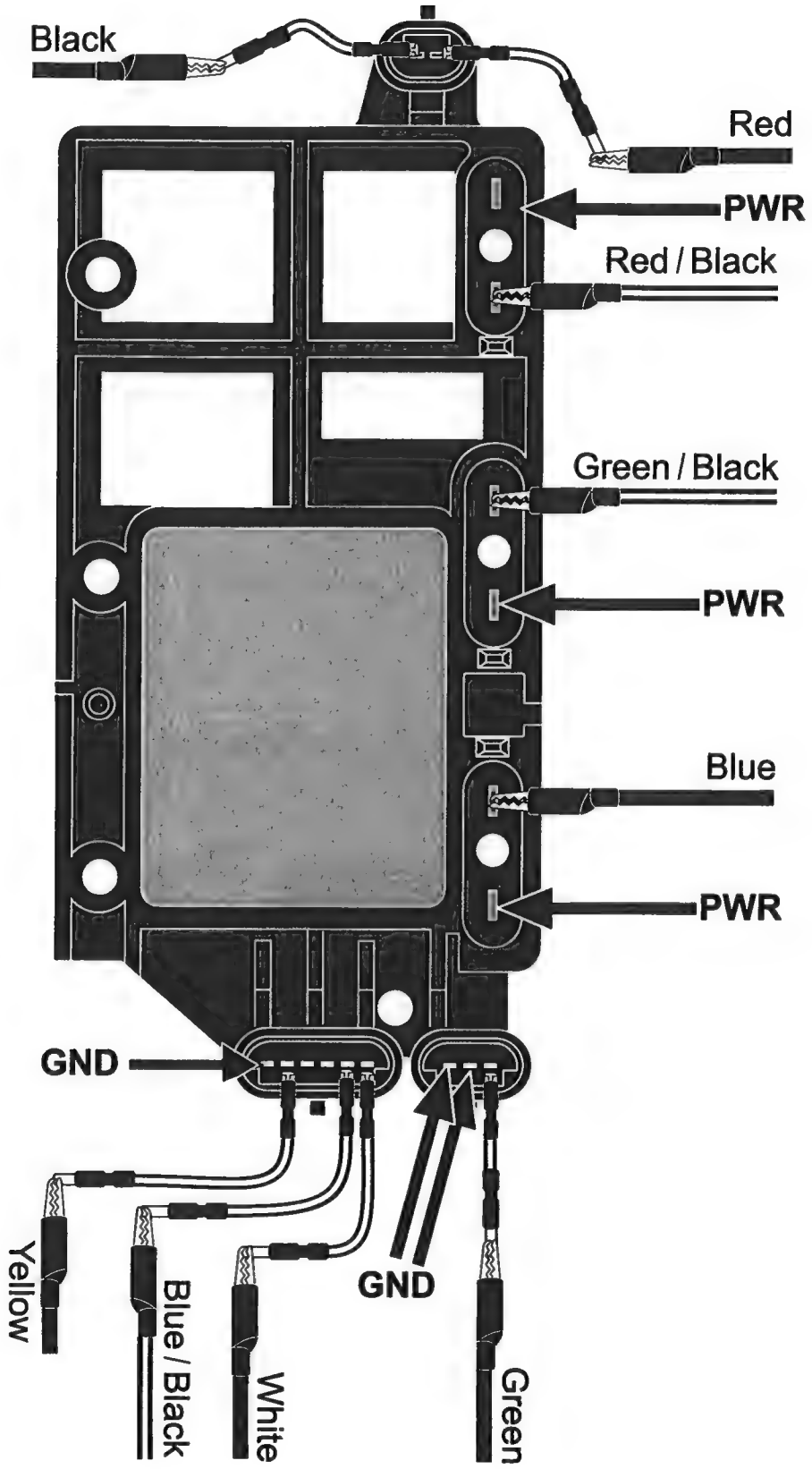
GM DIS/IDIS 4 Cyl
Module Type C -- 92-96
System Type 25



GM DIS/IDIS 4 Cyl
Module Type D
System Type 23

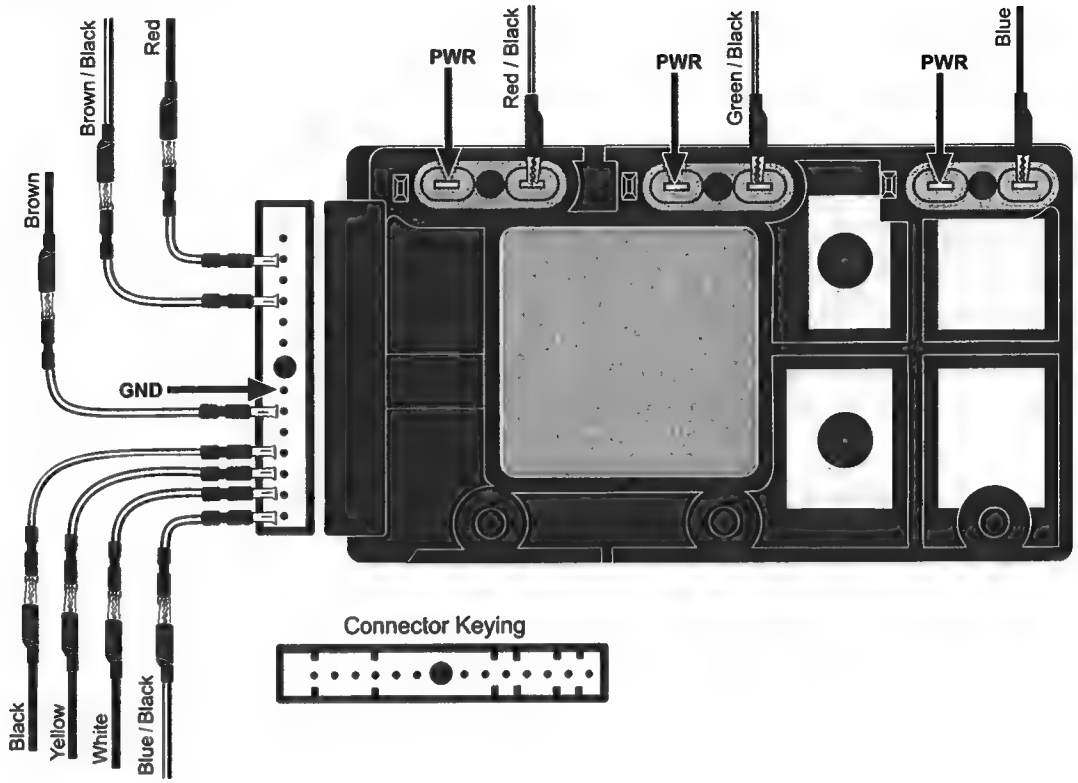


GM DIS 6 Cyl
System Type 2

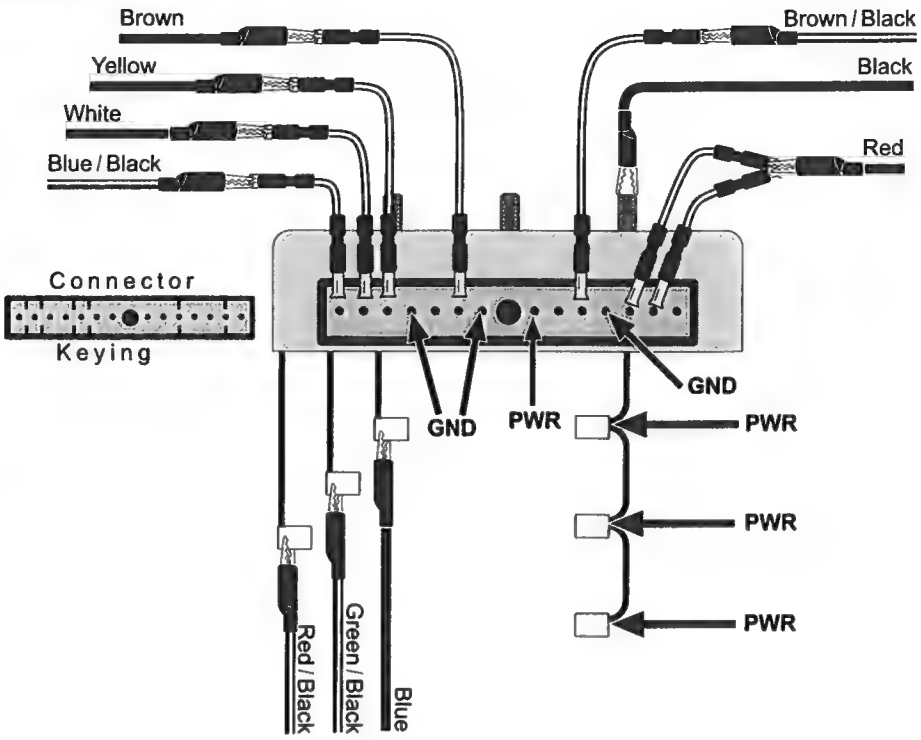


GM 3.0/3.3L Buick

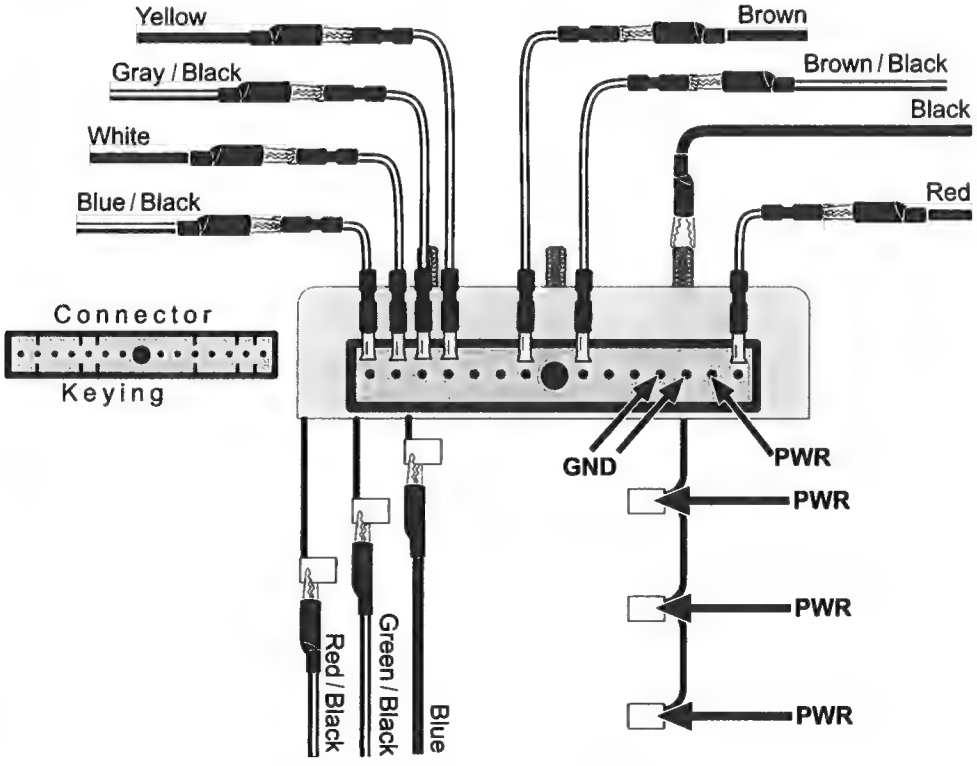
System Type 3



GM 3.8L C3I
System Type 4



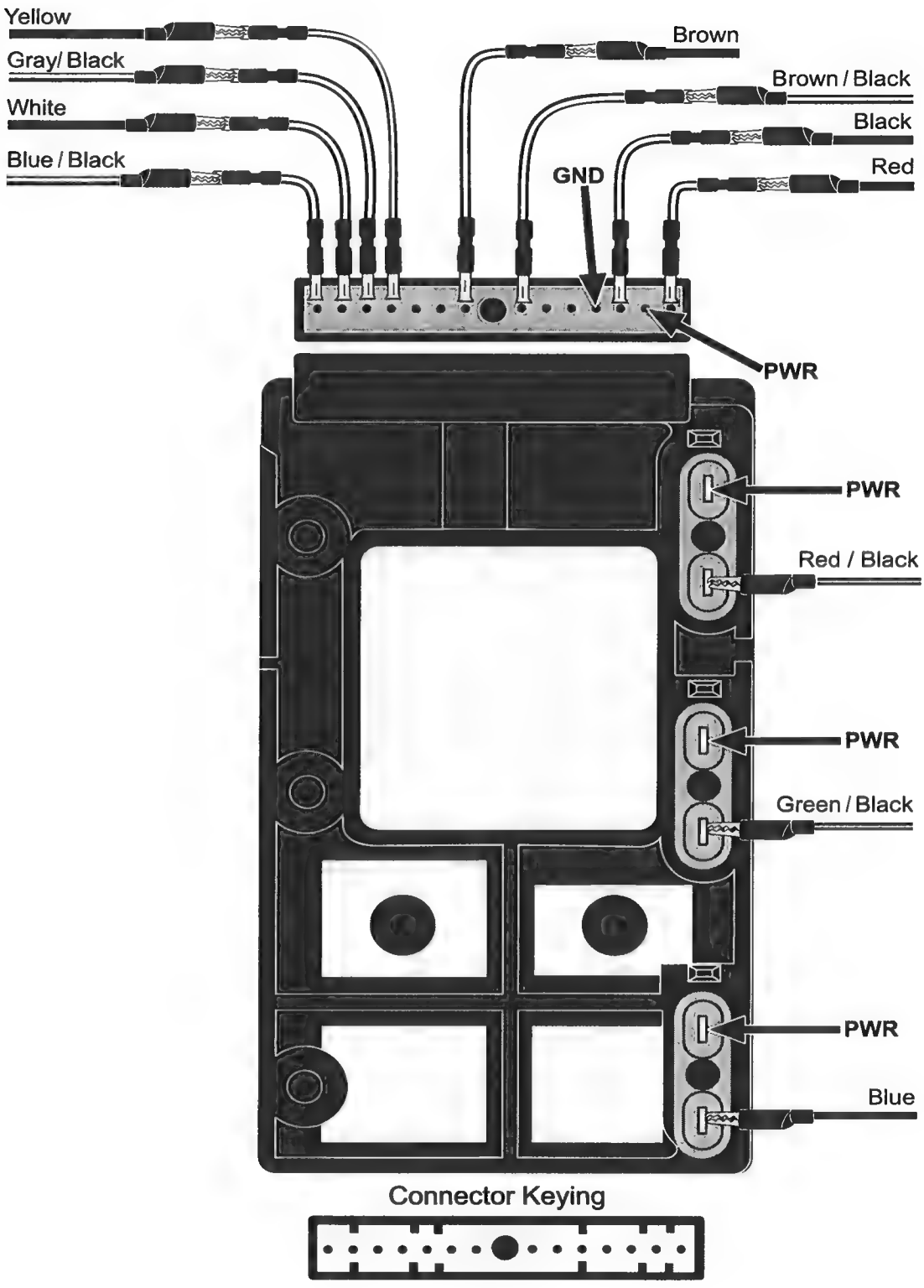
GM 3.8L C3I (Fast Start)
Module Type A
System Type 5



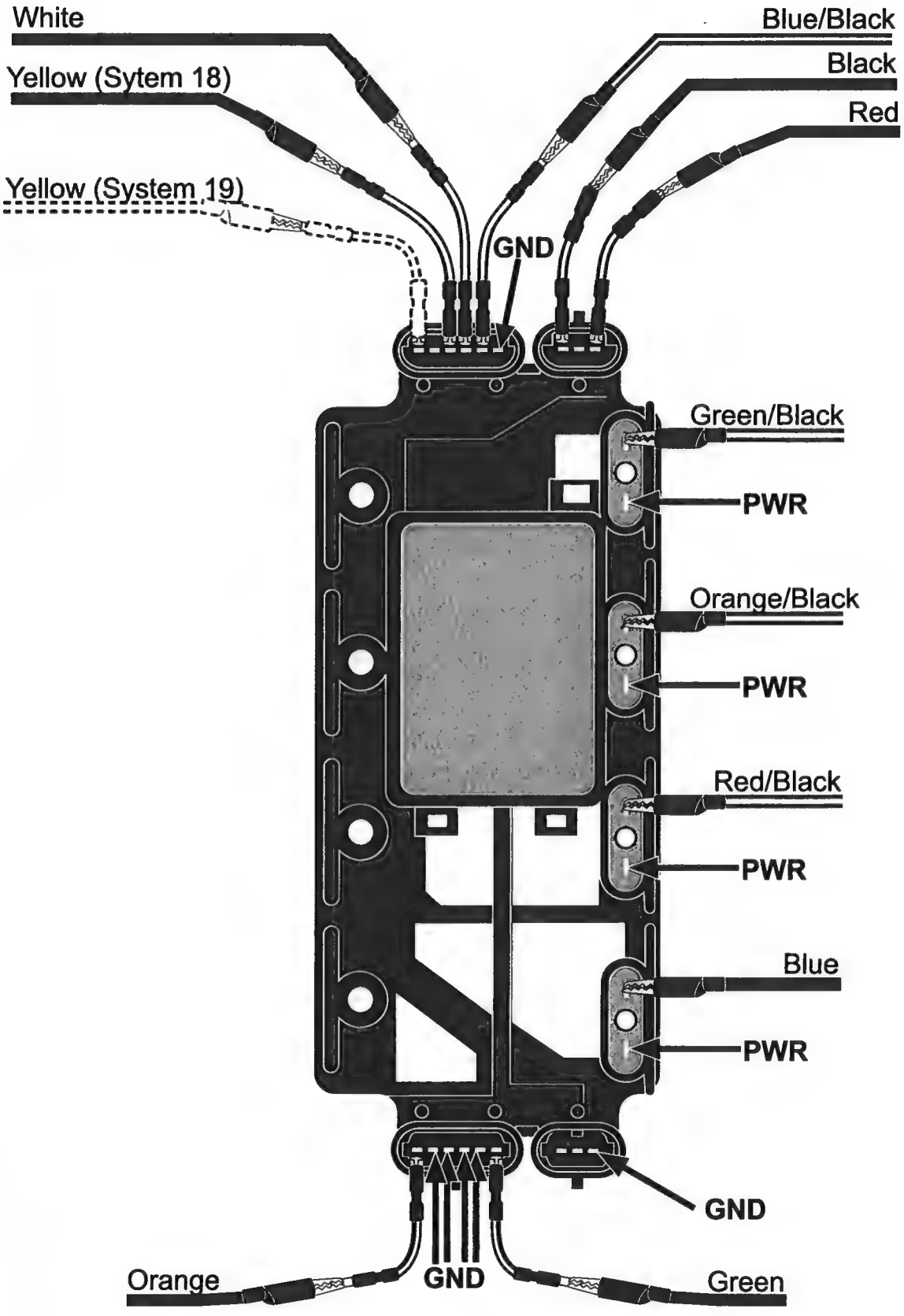
GM 3.8L C3I (Fast Start)

Module Type B

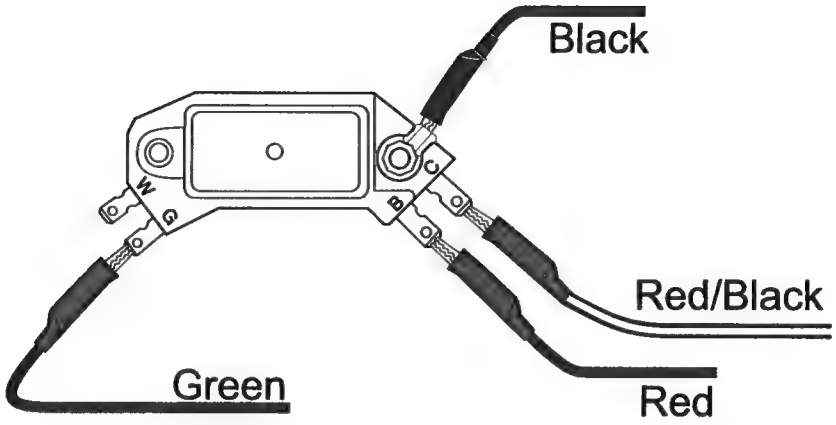
System Type 5



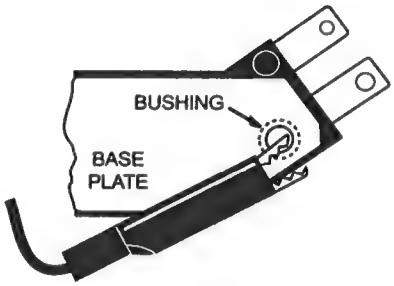
GM 8 Cyl. North Star
System Type 18 -- System Type 19
Both Test must pass for the module to be good.



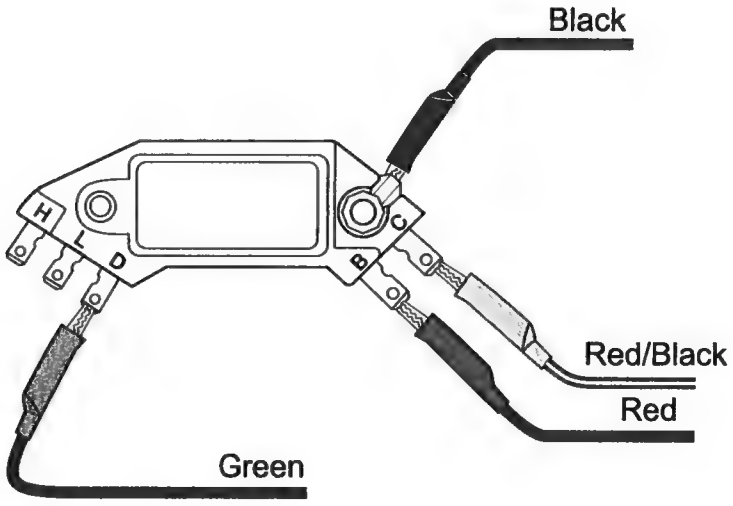
GM 4 pin HEI Systems
System Type 12



NOTE: Test clip must touch both base plate and bushing for both 4 and 5 pin modules

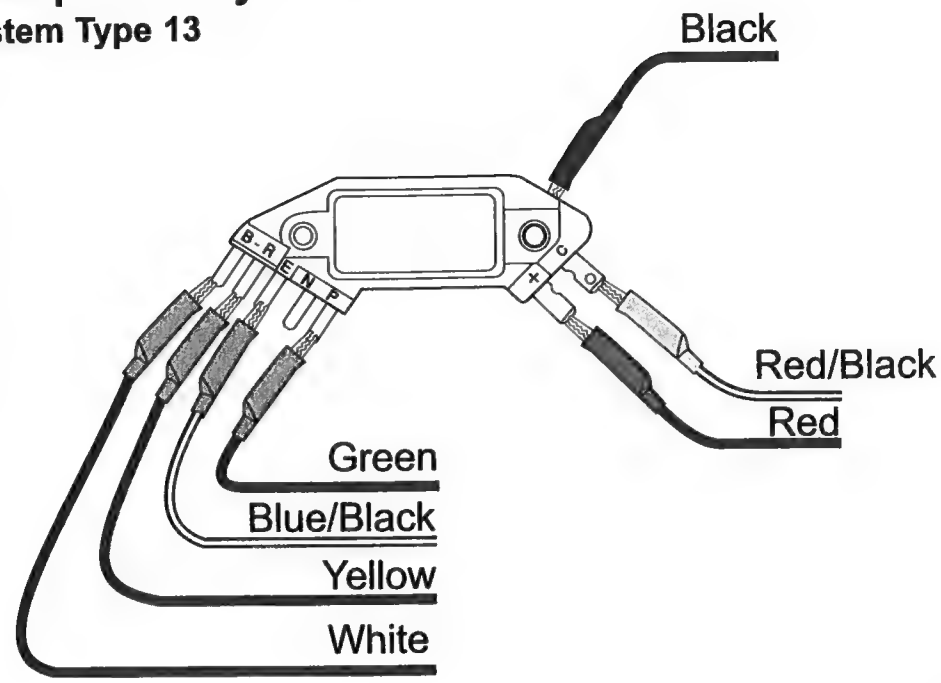


GM 5 pin HEI Systems
System Type 12

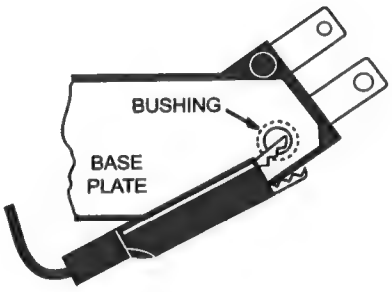


GM 7 pin HEI Systems

System Type 13

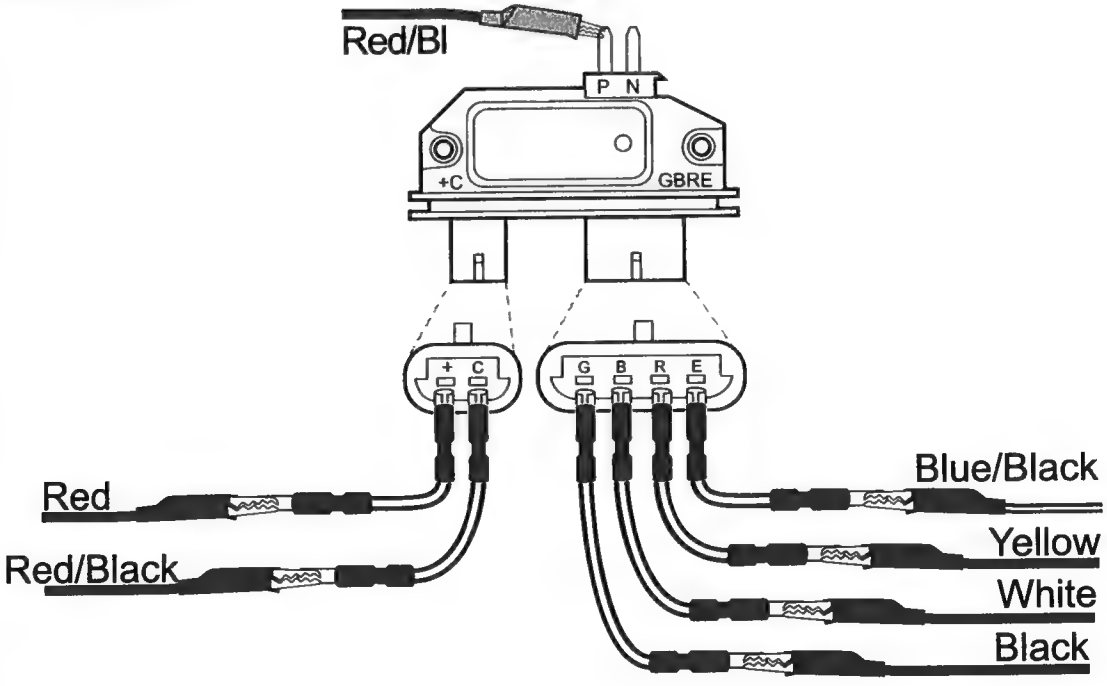


NOTE: Test clip must touch both base plate and bushing

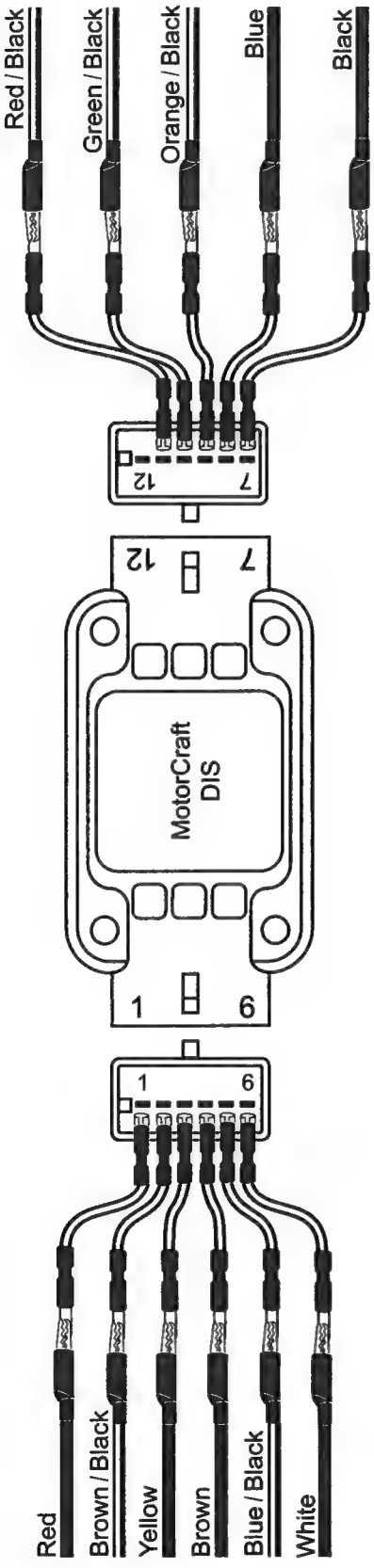


GM 8 pin HEI Systems

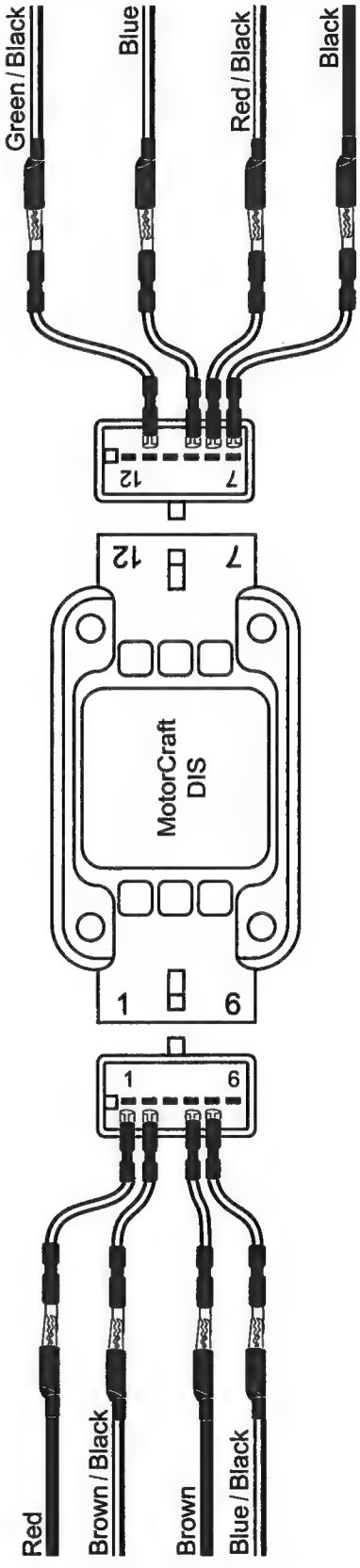
System Type 13



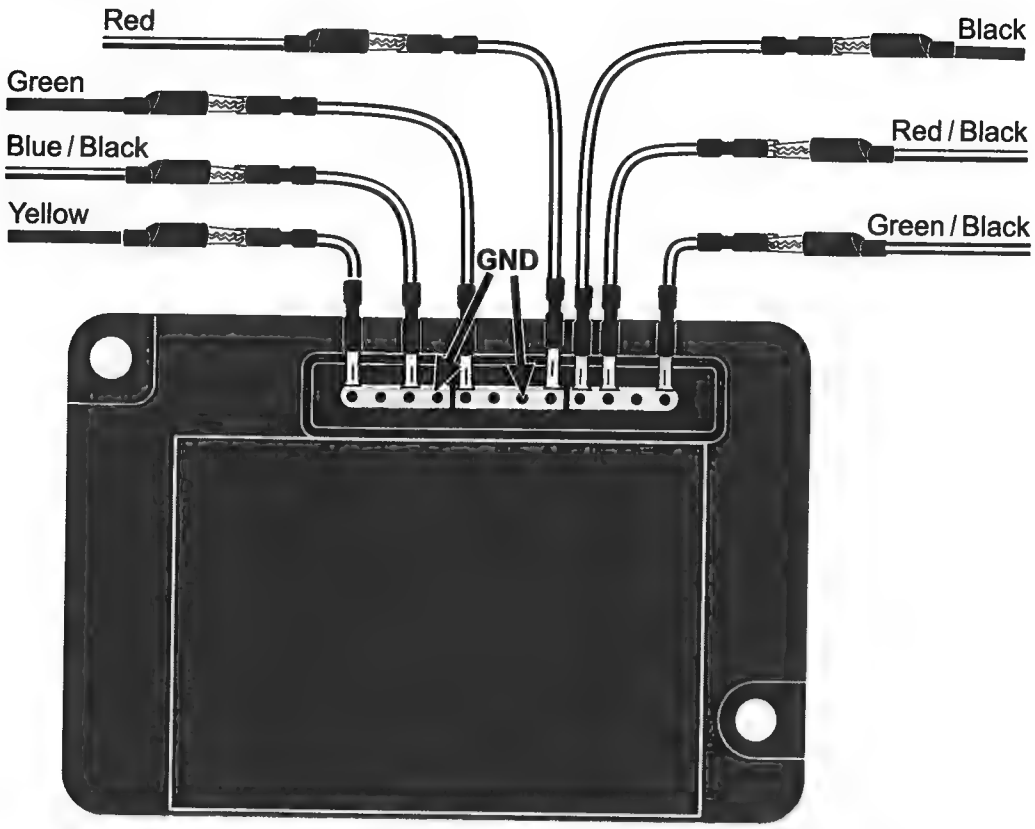
Ford DIS 4 Cyl Dual Plug
System Type 6



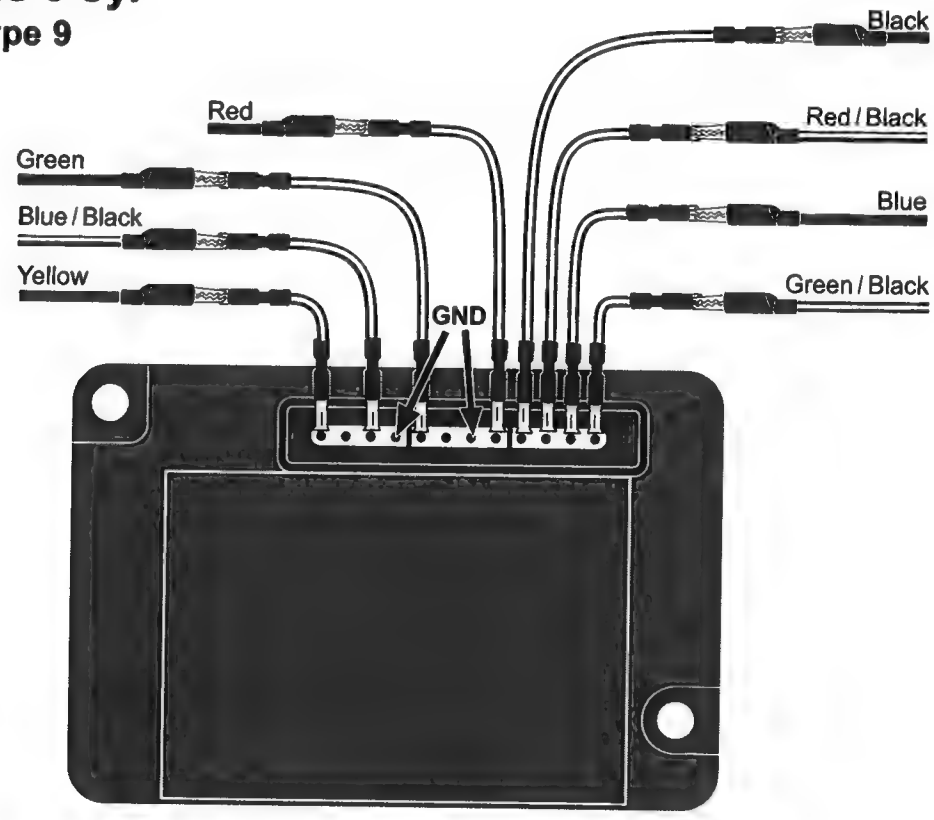
Ford DIS 6 Cyl
System Type 7



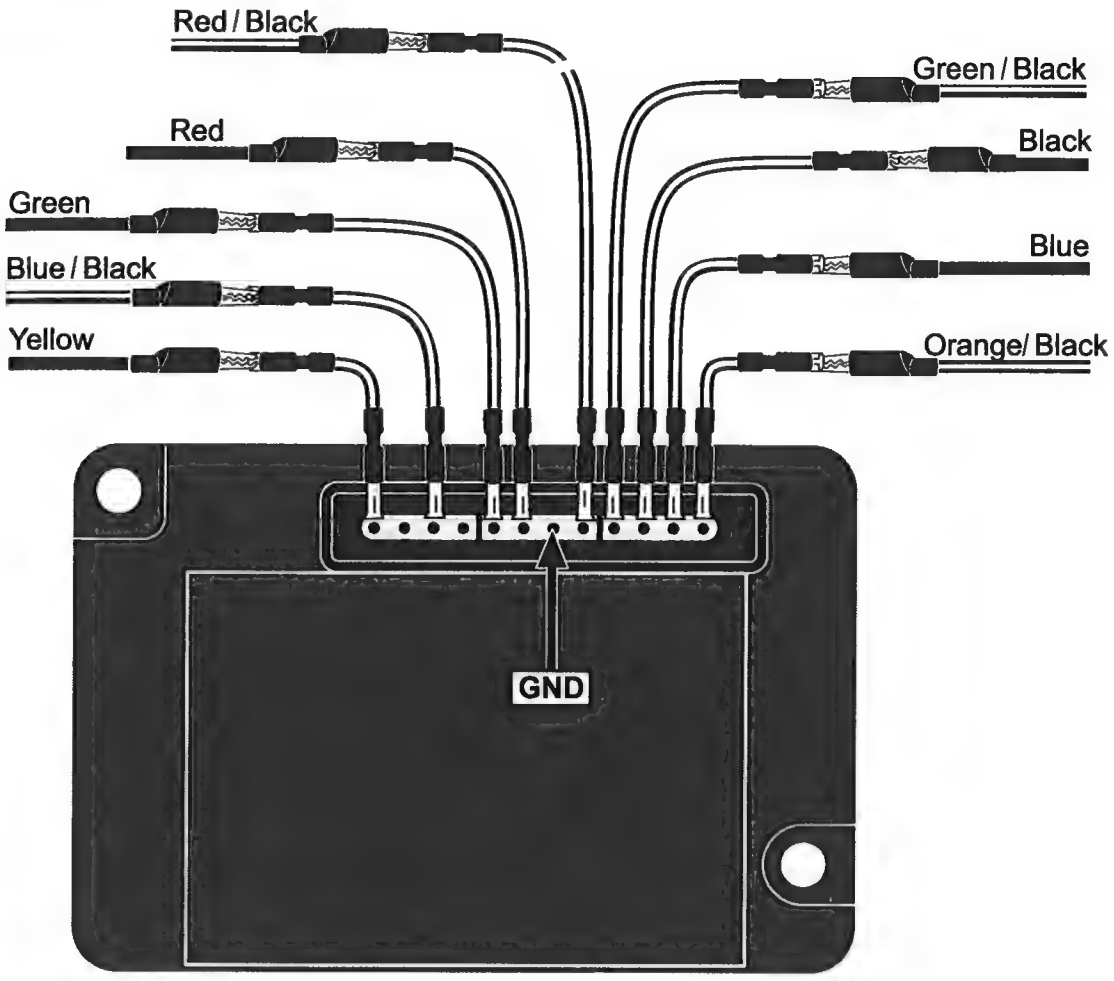
Ford EDIS 4 Cyl
System Type 8



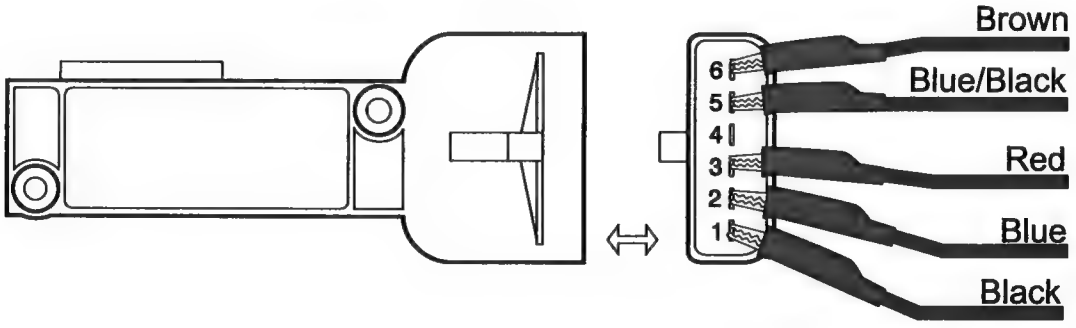
Ford EDIS 6 Cyl
System Type 9



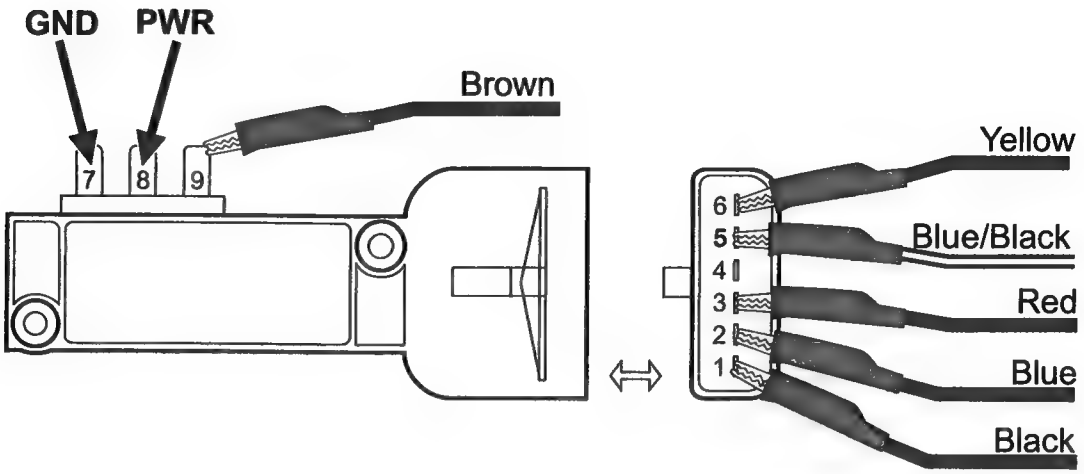
Ford EDIS 8 Cy
System Type 10



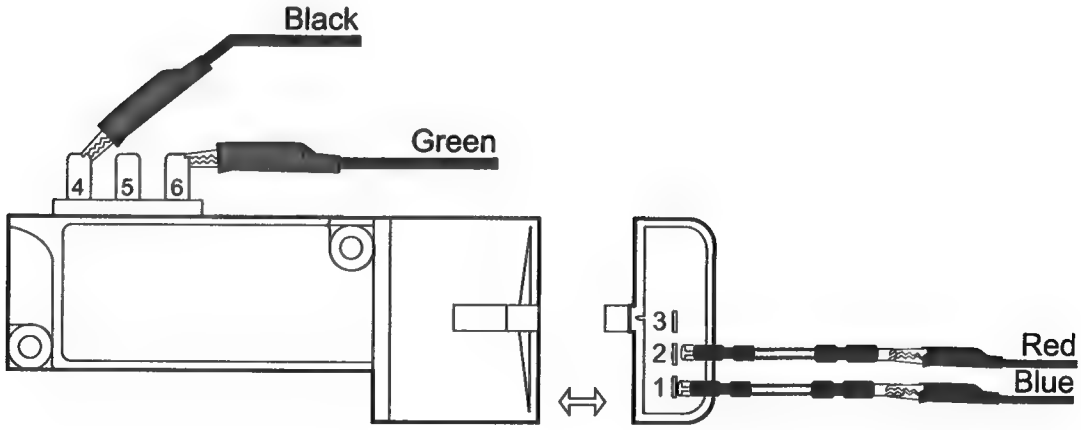
Ford TFI-IV Remote Mount (Closed Bowl)
System Type 15



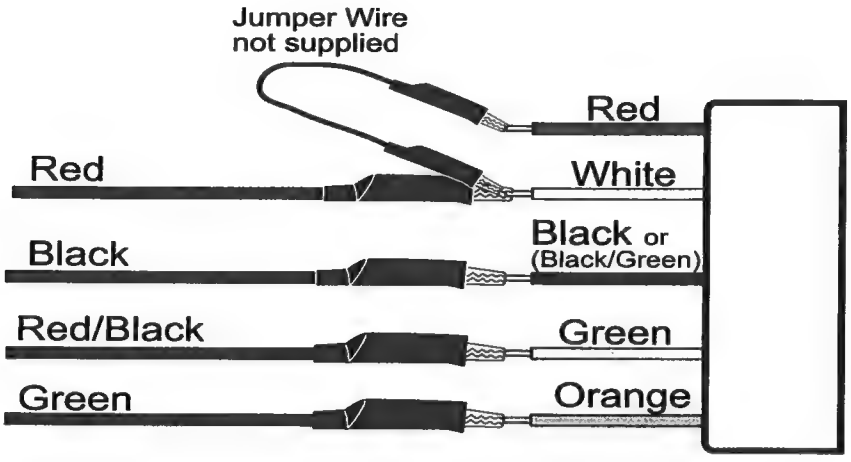
Ford TFI-IV Distributor Mount (Universal)
System Type 16



Ford TFI-I
System Type 17



Ford Dura Spark Systems
System Type 14



Yellow

ue/Black

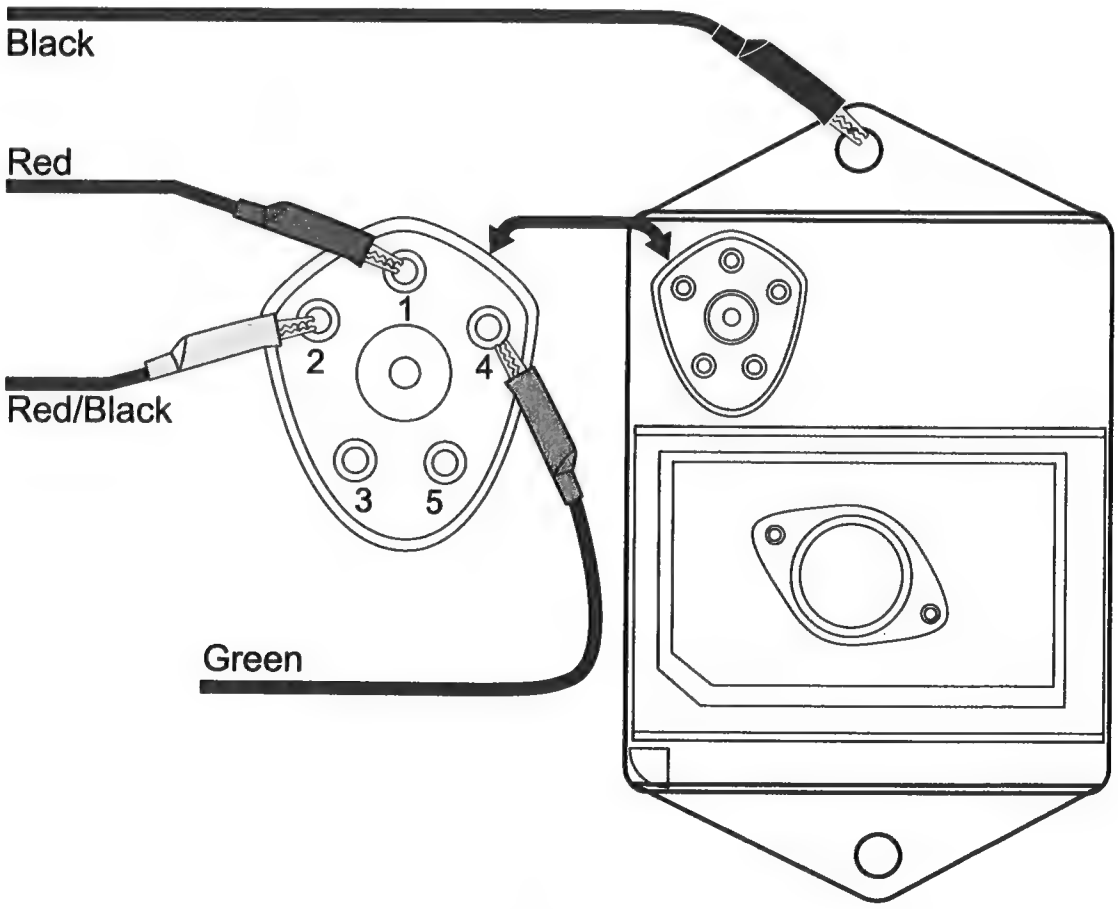
Red

Blue

Black

Chrysler Systems

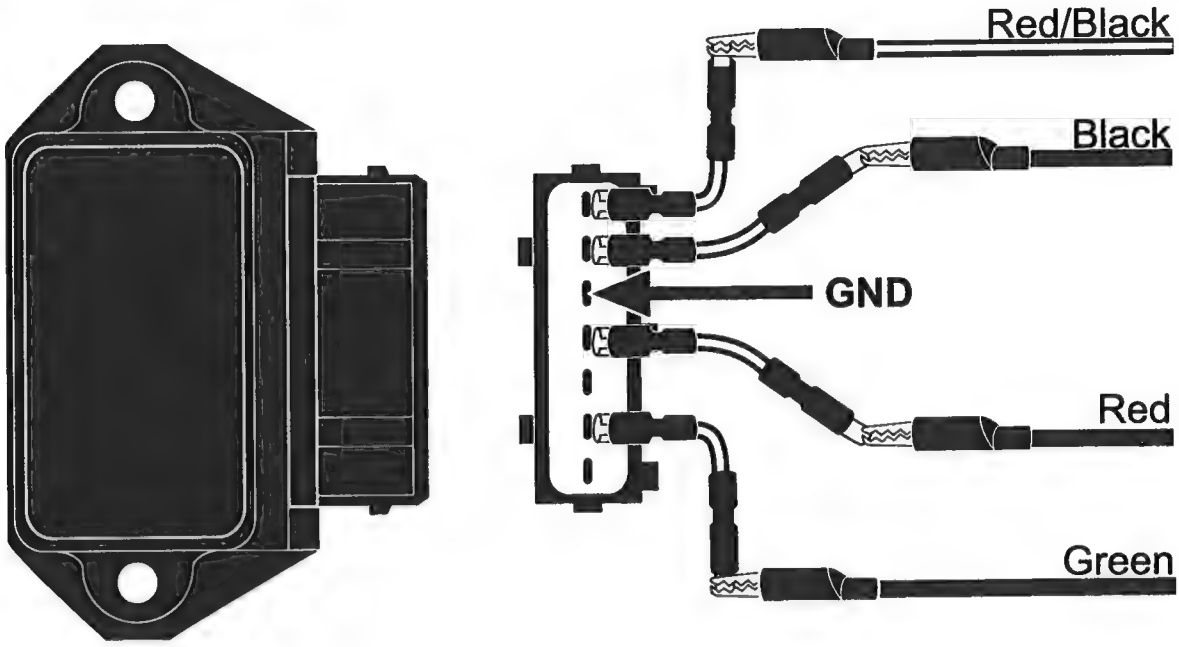
Chrysler EIS Systems
System Type 11



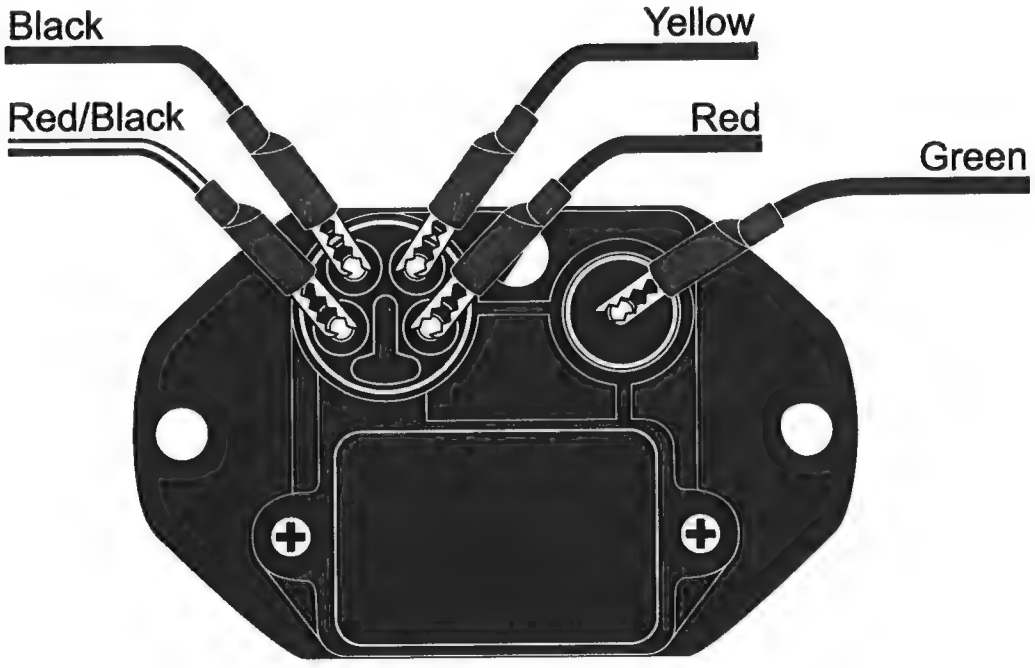
Red

Blue

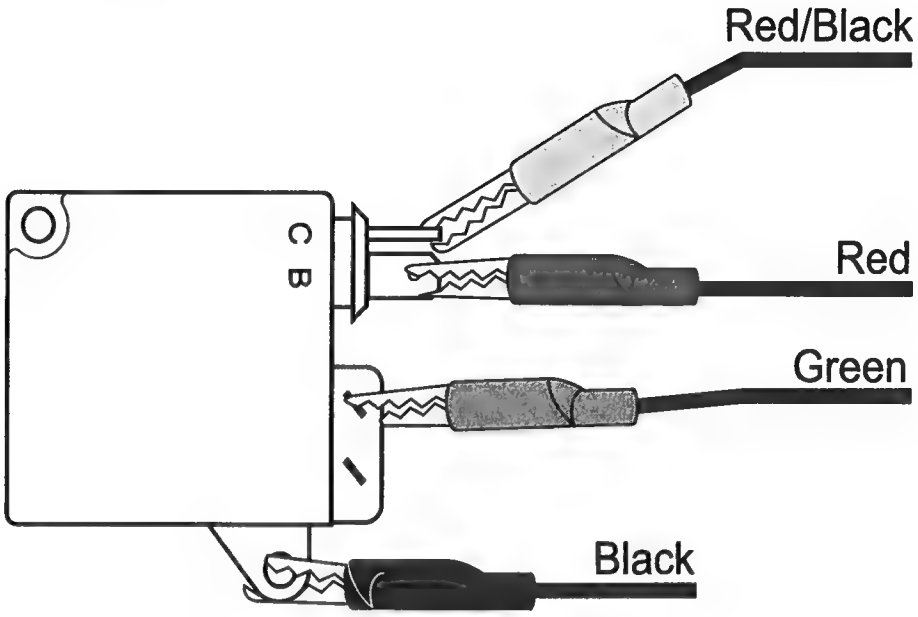
Bosh
Hall Effect Ignition System
System Type 20



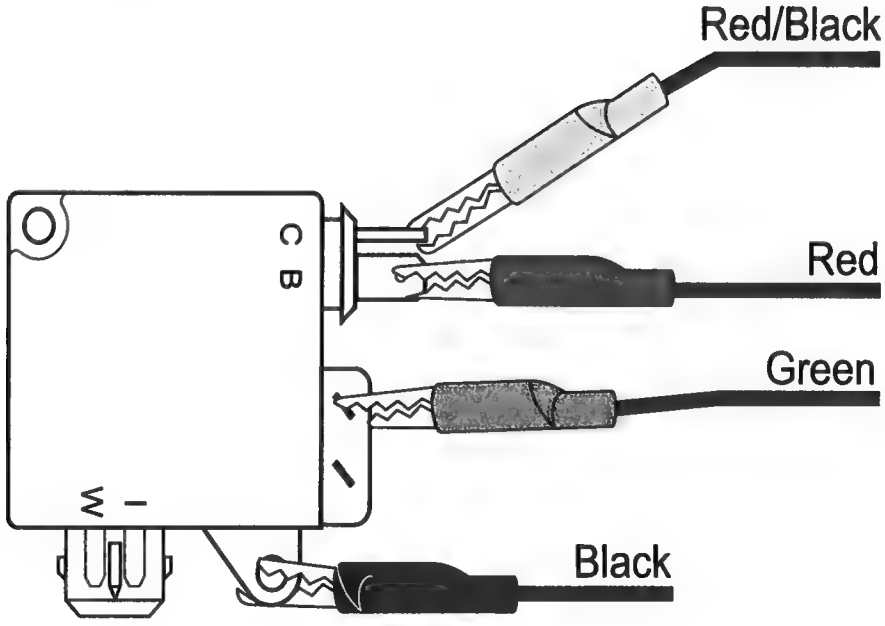
Bosh
Electronic Ignition System
System Type 21



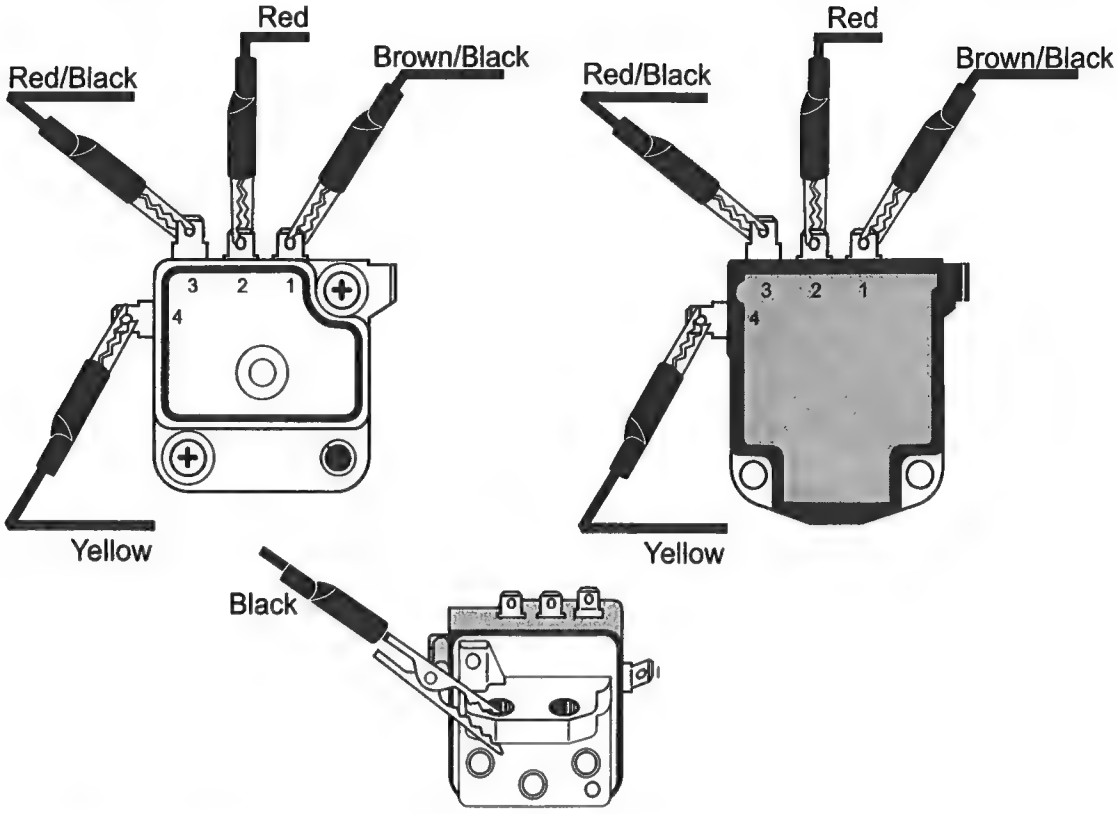
Hitachi System
Early Style -- 4 pin
System Type 20



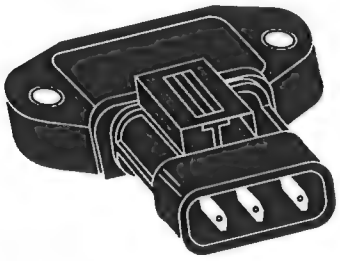
Hitachi System
Early Style -- 6 pin
System Type 20

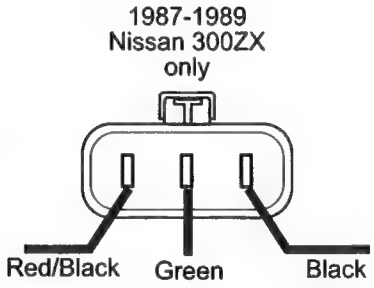


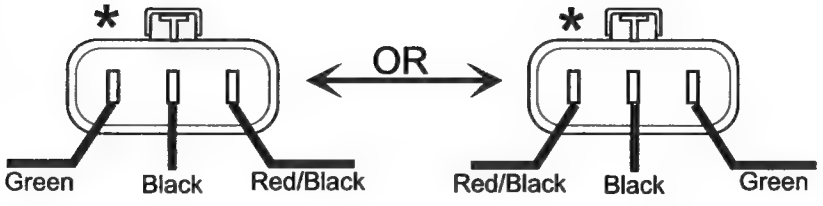
Hitachi System
Late Style
System Type 21



Hitachi System
Photo-Electric -- One Coil
System Type 20







* Nissan uses two types connector wiring. Module is food if either hook-up tests O.K.

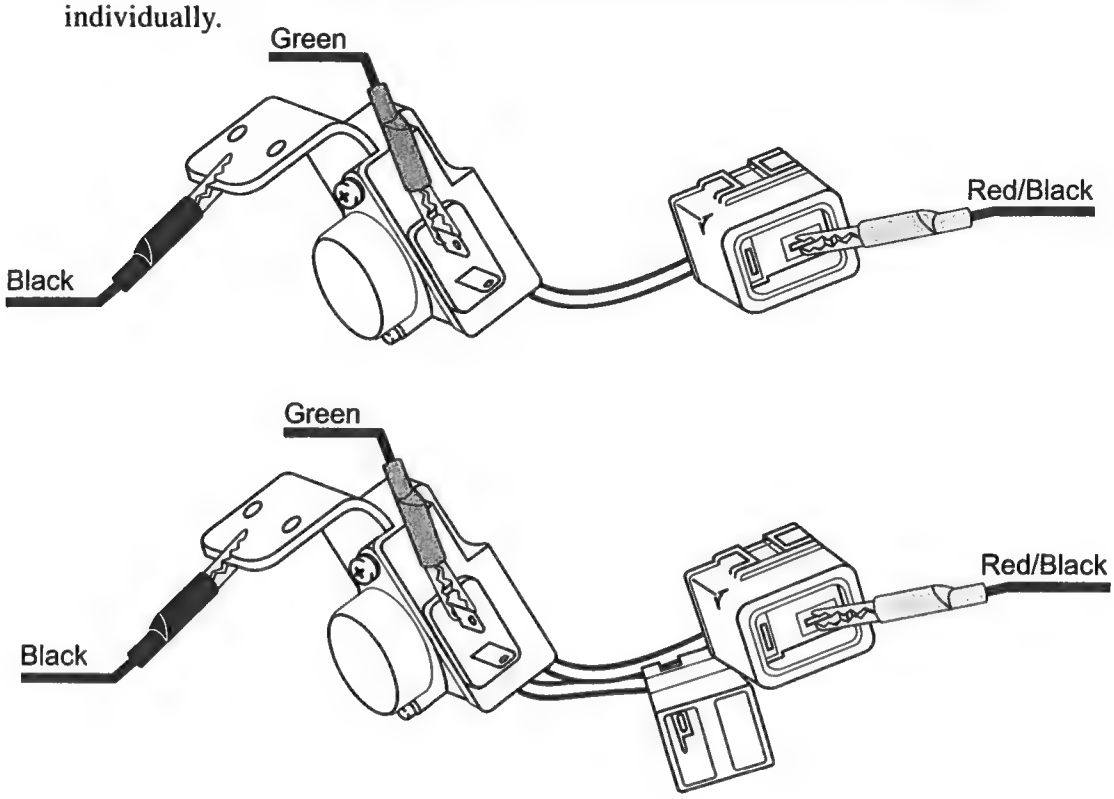
n/Black

Hitachi System

Photo-Electric -- Two Coil

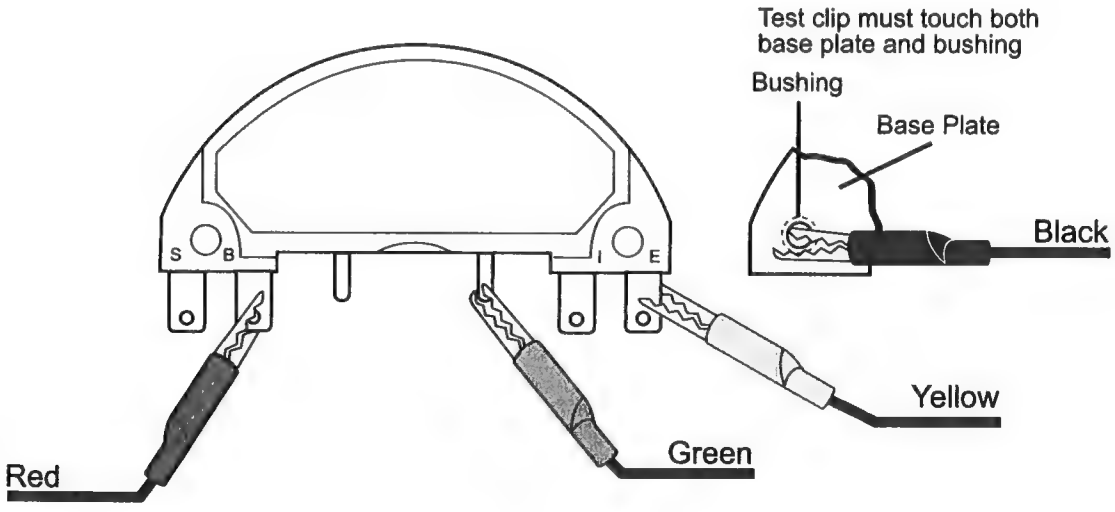
System Type 20

The vehicle will have one of each of the modules shown below. Test them individually.

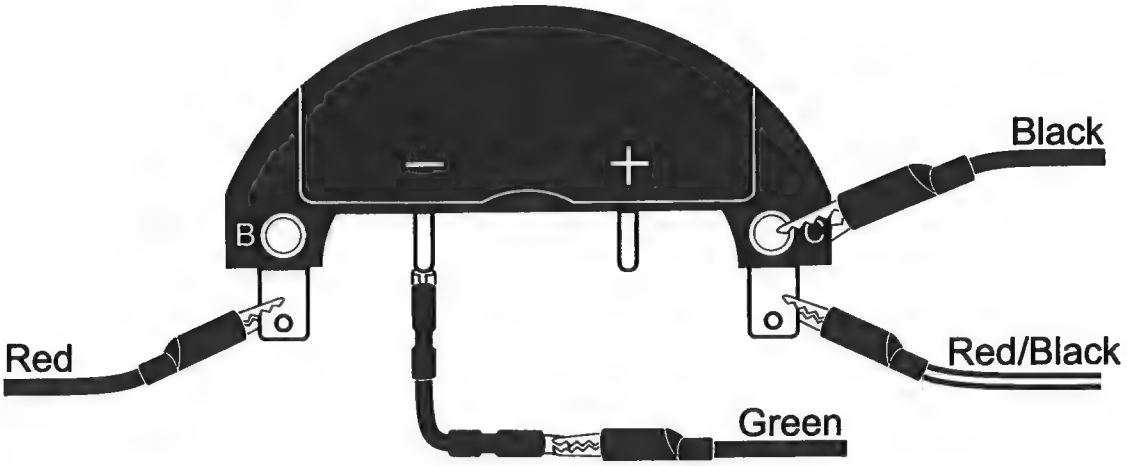


Mitsubishi System Type

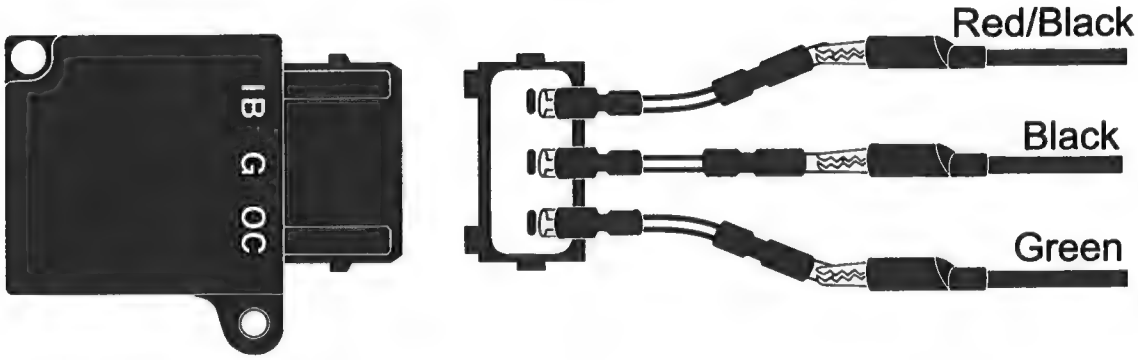
System Type 20



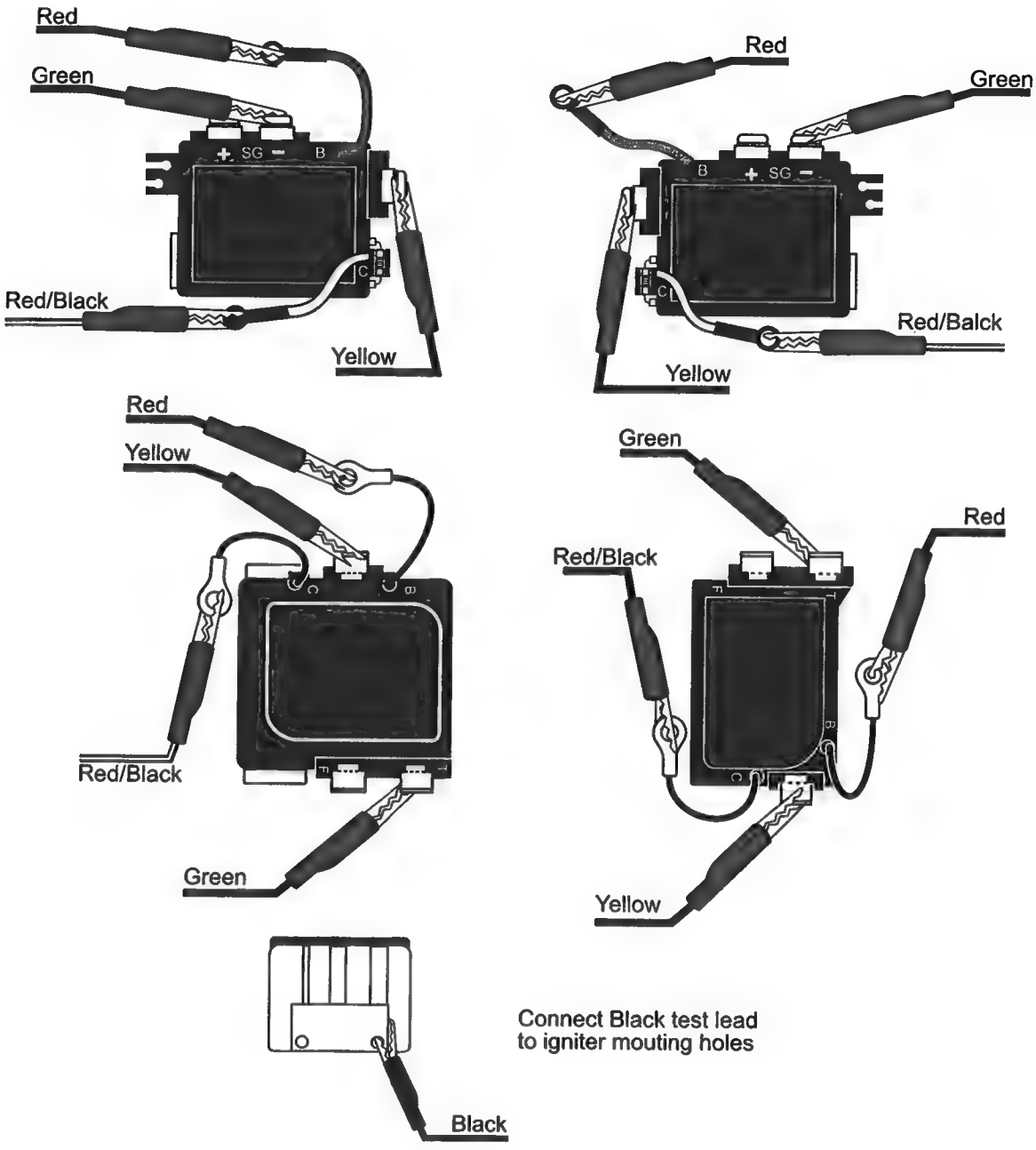
Mitsubishi System Types
System Type 20



Mitsubishi System Types
System Type 20



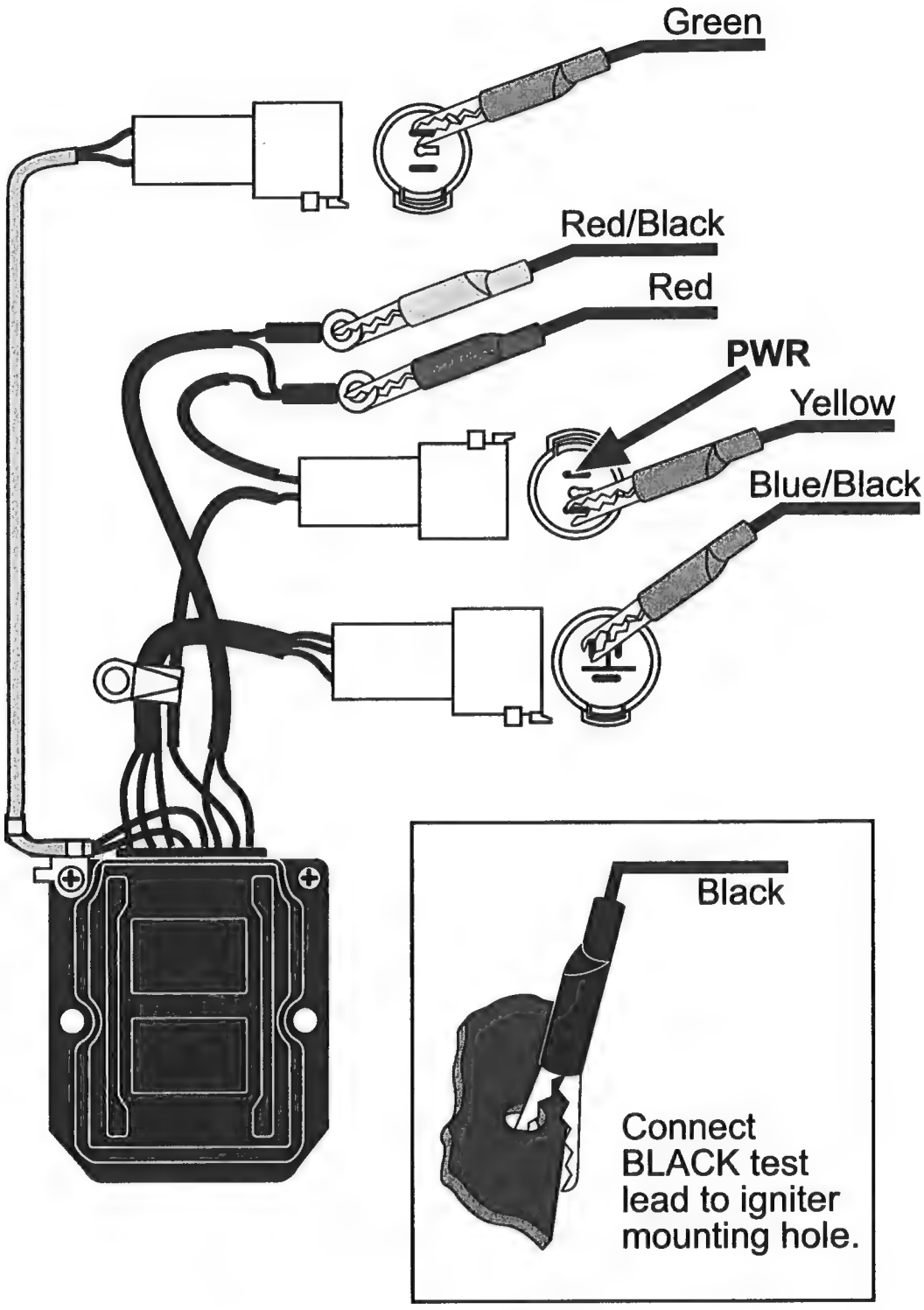
Nippondenso System Type
Internally Mounted
System Type 21



Nippondenso System Type

Externally Mounted -- Module Type A

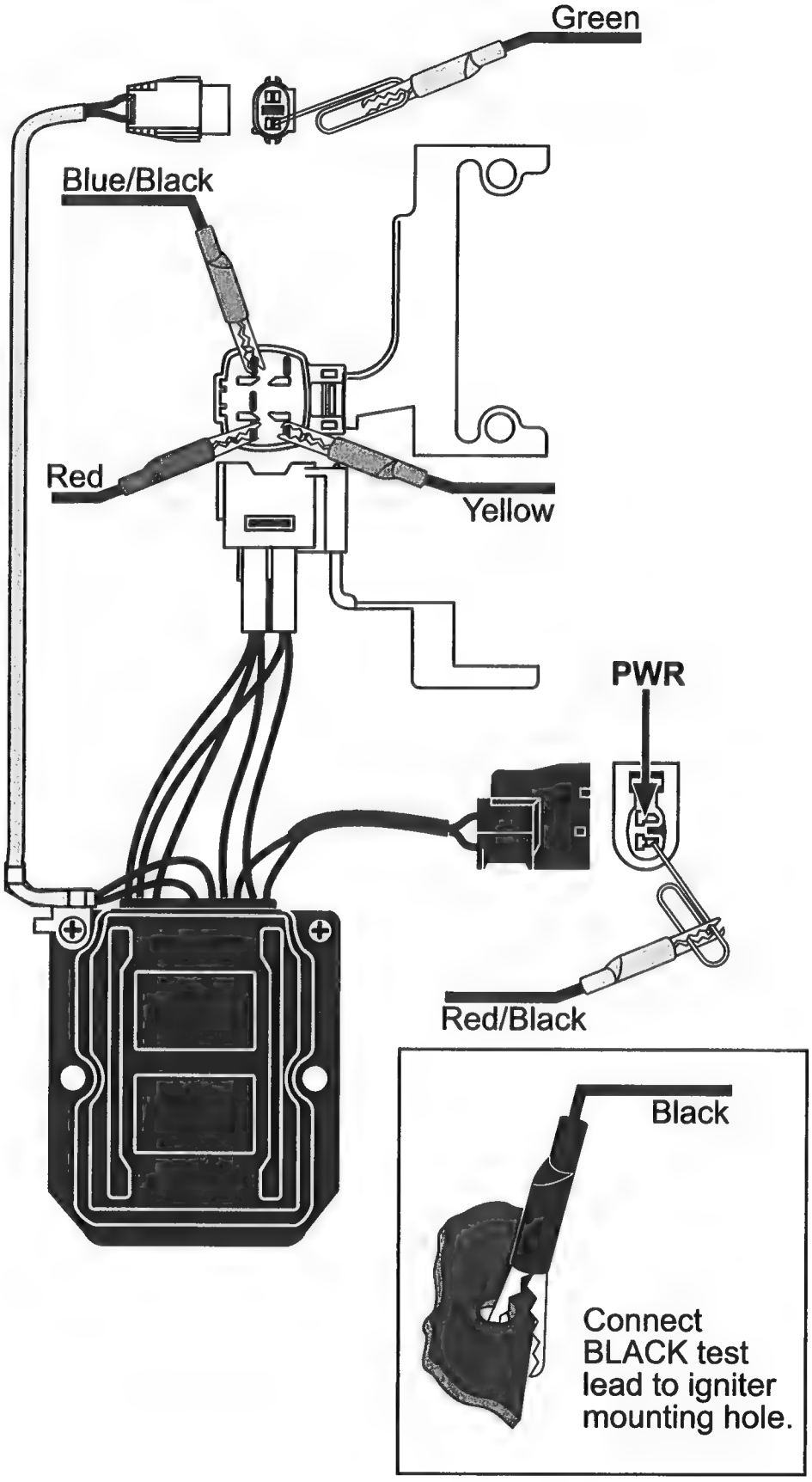
System Type 13



Nippondenso System Type

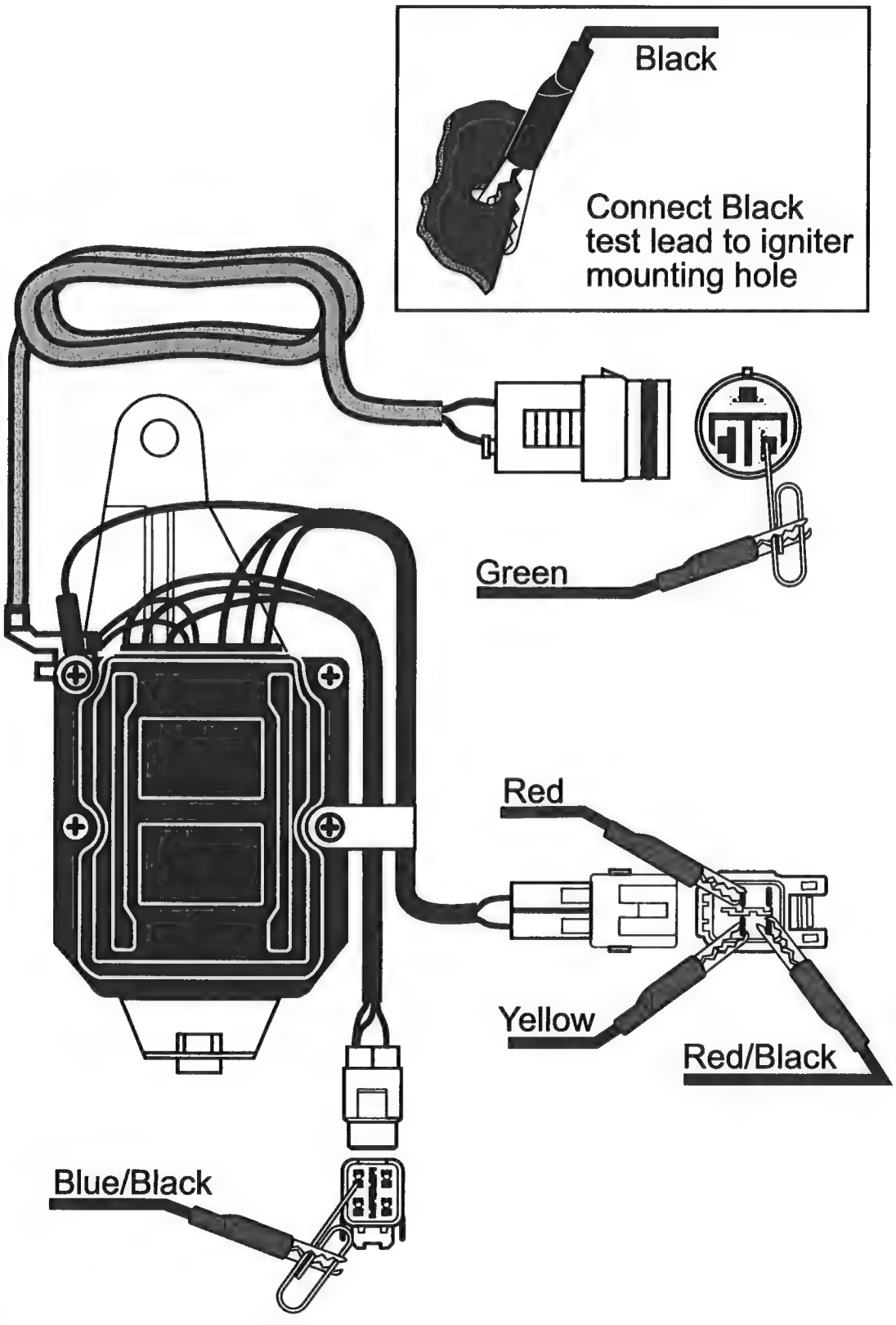
Externally Mounted -- Module Type B

System Type 13

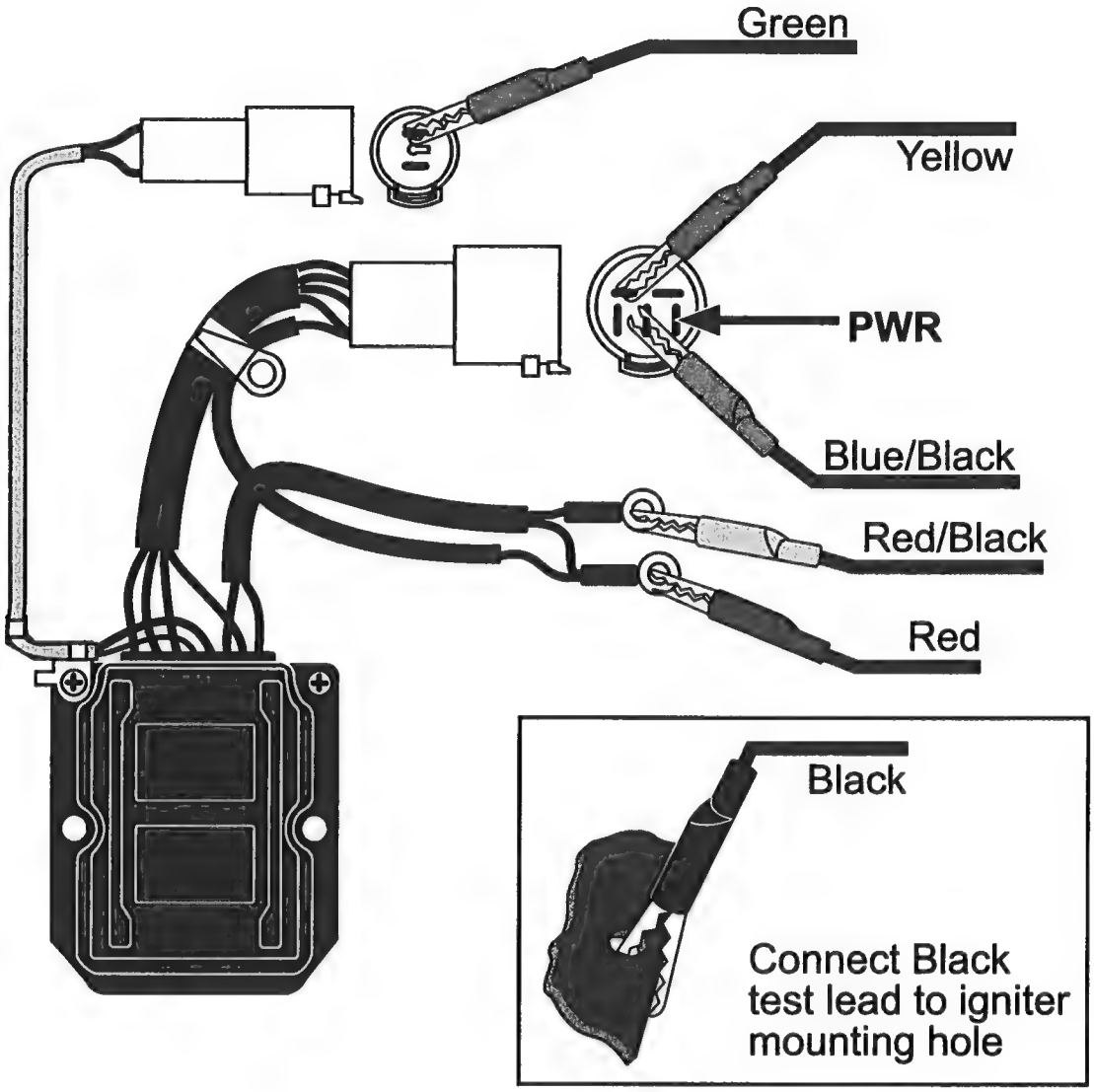


Nippondenso System Type

Externally Mounted -- Module Type C
System Type 13



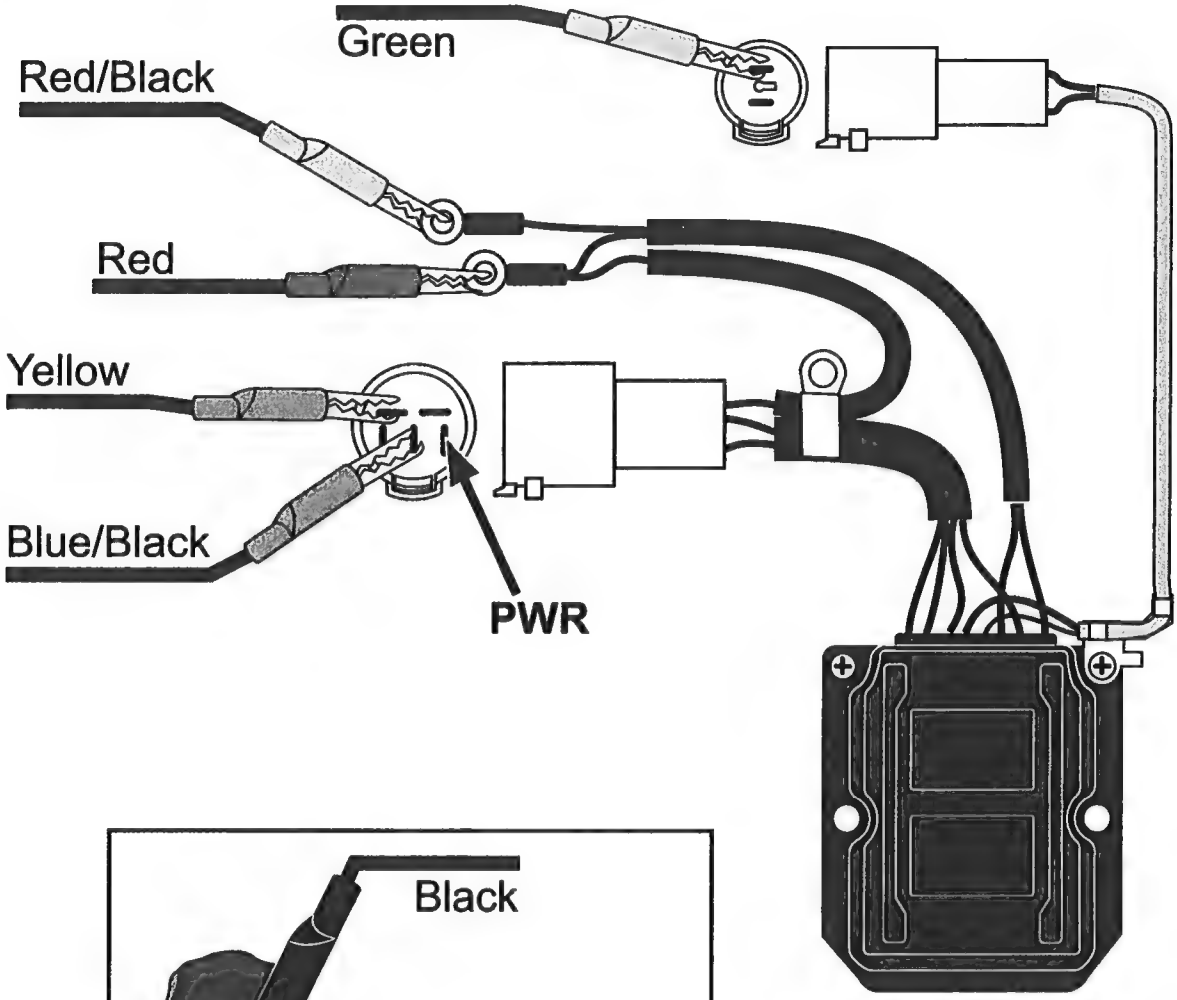
Nippondenso System Type
Externally Mounted -- Module Type D
System Type 13

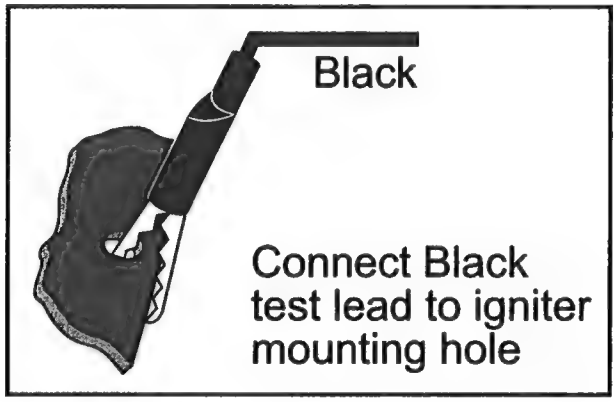


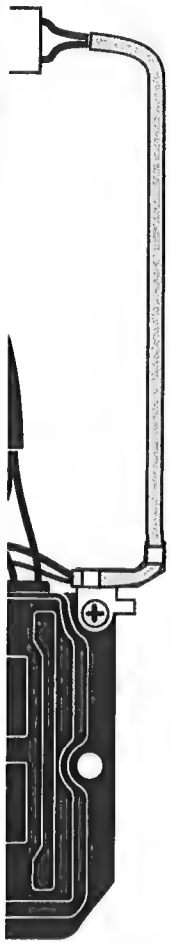
Nippondenso System Type

Externally Mounted -- Module Type E

System Type 13

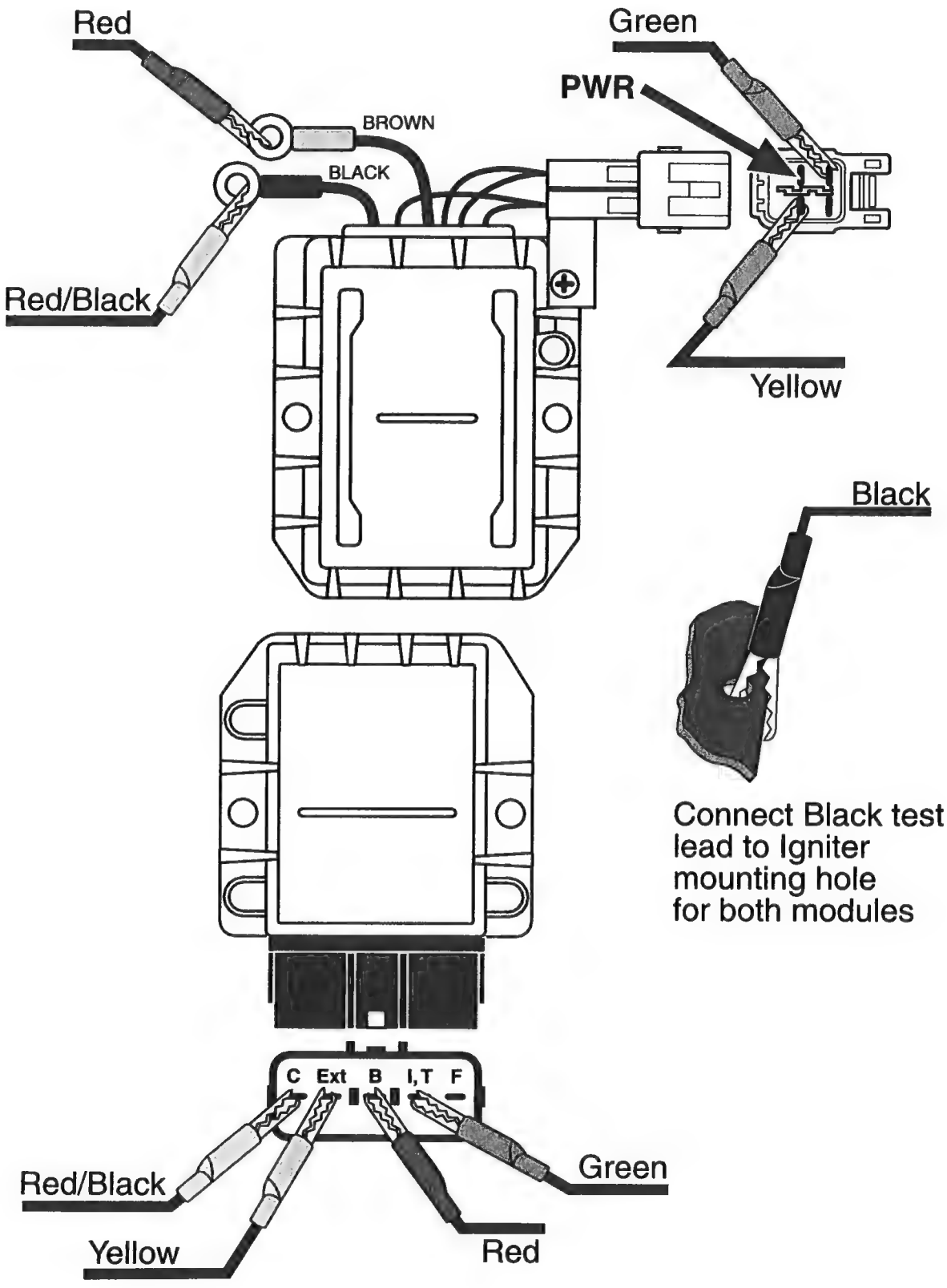






Nippondenso System Type

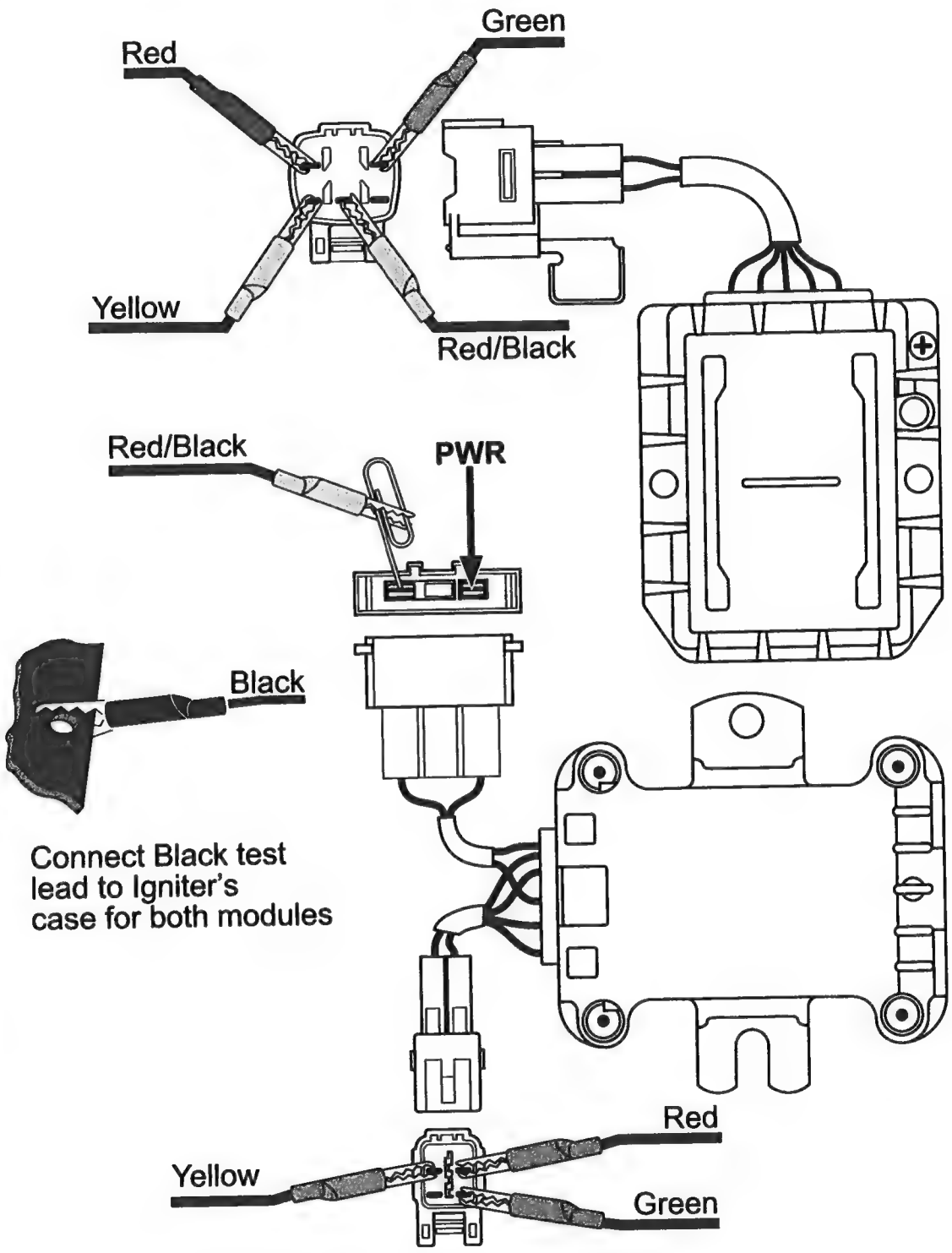
ESA (Electronic Spark Advance) -- Module Type A & B
System Type 21



Nippondenso System Type

ESA (Electronic Spark Advance) -- Module Type C & D

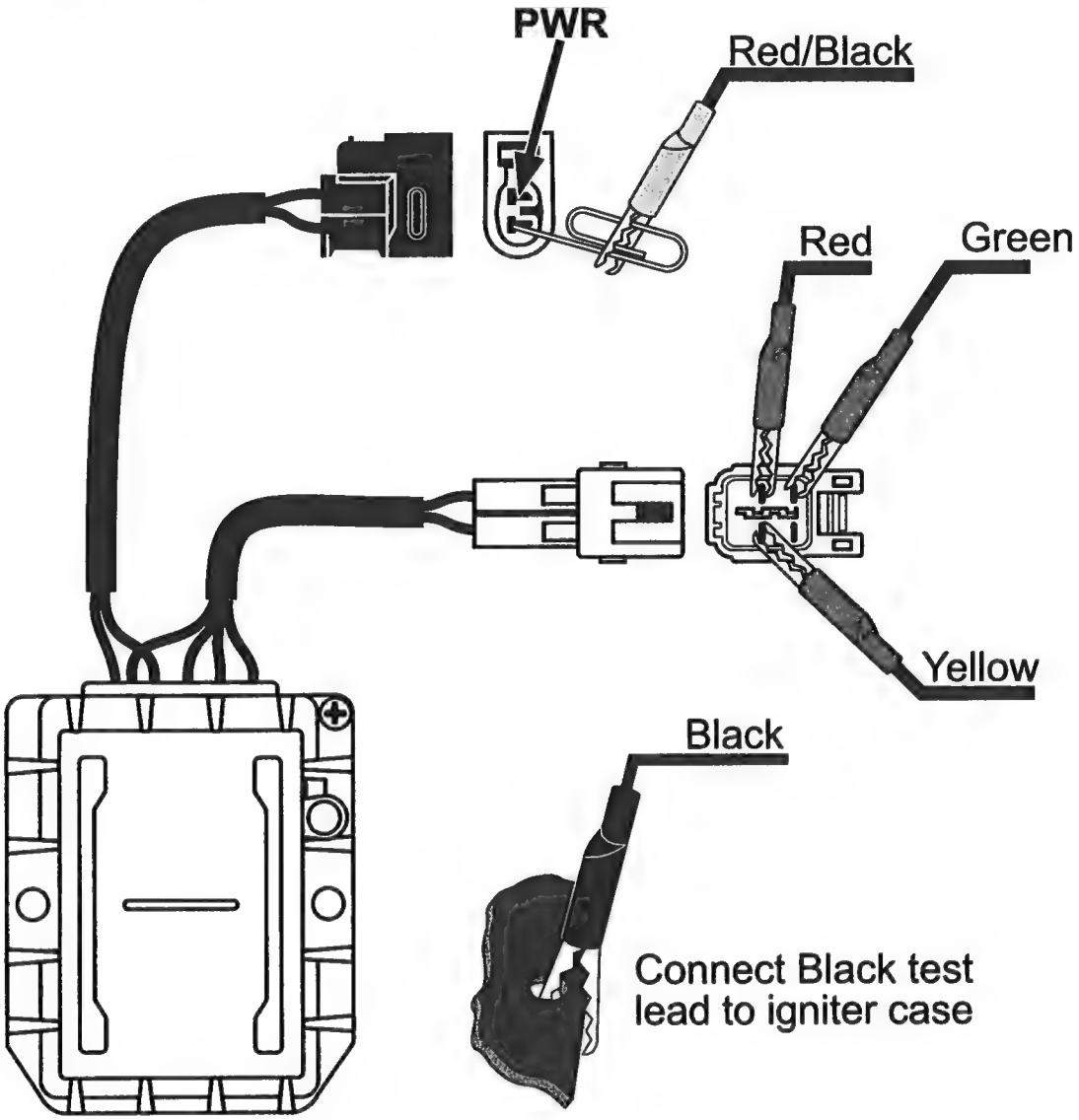
System Type 21

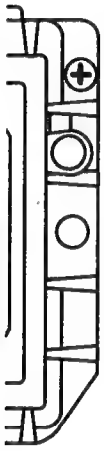


Nippondenso System Type

ESA (Electronic Spark Advance) -- Module Type E

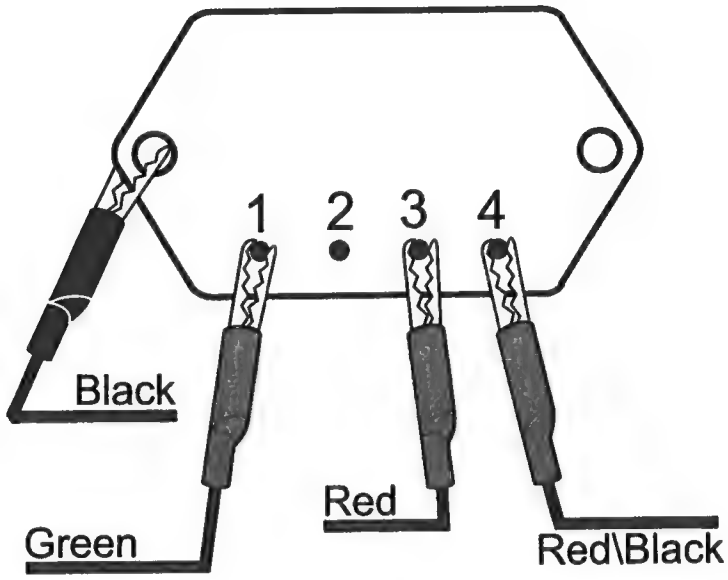
System Type 21





Toyo Denso System Type

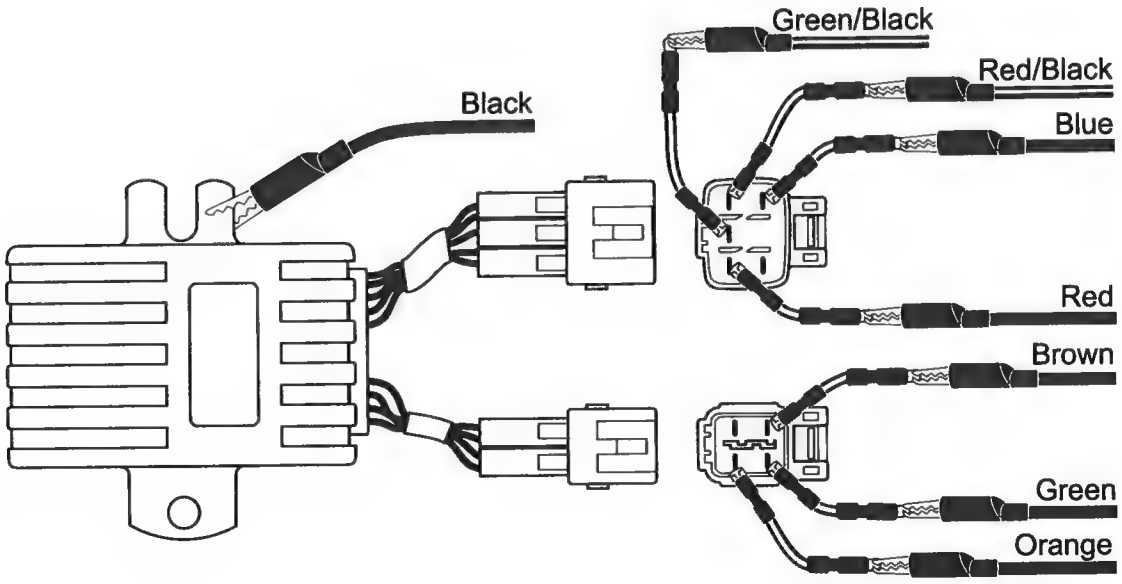
System Type 20



Toyota DIS System Type

Supra Turbo

System Type 22



Section 3: KV Testing

KV testing is a relative test of ignition system condition. It is important that all ignition system components be in good condition before testing. This will insures that testing will give a true indication of coil output. Before testing check to be sure:

- Engine has good compression.
- Spark plugs are in good condition and properly gapped.
- Engine timing is at manufacturer's specification.
- All spark plug wires are in good condition and at the correct resistance.

CAUTION: Dangerous voltages may be present on ignitions system components during KV testing.

Most DIS ignition systems use coils that connect to two secondary wires and plugs. Some manufactures put two or more DIS type coils in one package, called a coil pack. Because each coil fires two plugs, the number of coils needed is reduced. This type of ignition coil setup will fire one plug from the side of plug to center electrode. The other plug connected to the same coil will fire from center electrode to side. This difference will causes a noticeable difference ignition voltage readings. The voltage readings of the two plugs on one coil can vary from as much as 5KV. This is normal. To avoid being mislead, only compare similar firing types readings to each other on DIS systems. If voltage measurements, on the same type of firing plugs, varies by more than 5KV, a problem may exist in an ignition coil or other ignition components.

NOTE: Some engine applications use two spark plugs per engine cylinder. The second plug may not be used at all times. Do not be concerned if all of the secondary plug circuits read 0.

Red/Black

Blue

To compare only similar firing types, group like firing type secondary circuits together follow these steps;

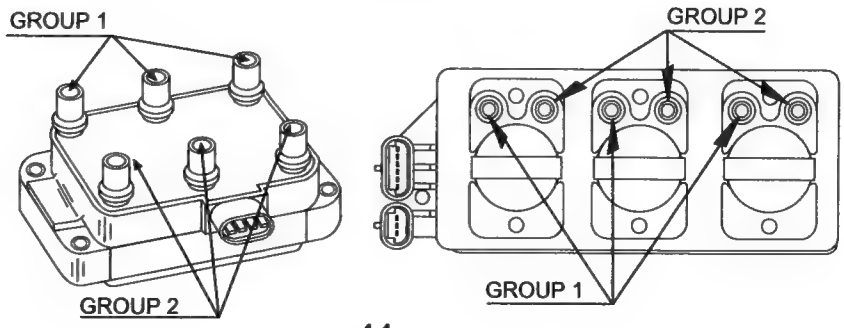
Note the two secondary connections locations on each coil.

Compare the voltage readings from the like locations on all coils to each other.

Red

Brown

See the illustration below for further detail.



Green

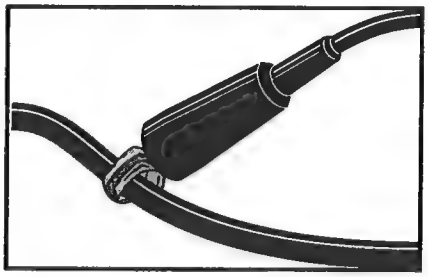
Orange

KV Test Procedure:

Warning: KV testing will be conducted with the engine running. To avoid injury to yourself or damage to the test equipment or vehicle: Always keep yourself, tools, and test equipment away from all moving or hot engine parts.

1. **Connect KV cable to Tester at KV jack.**

2. **Attach KV clamp to spark plug wire.** It is a good idea to test the ignition wires in sequence, beginning with cylinder #1. You may also want to draw a picture of the engine and spark plug wires showing the order in which you will be testing. A drawing will help you remember which cylinder corresponds to which memory reading. The DIS Module/ KV Tester can store up to twelve (12) secondary voltage readings in memory.



3. **Connect DIS Module/KV Tester to vehicle battery.**
   Connect battery clips to the vehicle battery: RED to the positive (+) terminal and BLACK to a good vehicle ground.

4. **Move POWER switch to <u>ON</u> position.** Tester will perform a self-test on itself. During the self-test the GOOD and BAD MODULE LEDs will turn on briefly. The three digit display will show "88.8" briefly to indicate displays are functioning properly.

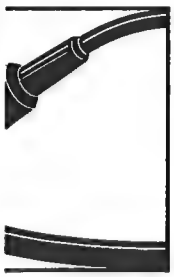
5. **Place FUNCTION switch in the <u>KV</u> position.**
   When you place the FUNCTION switch in the KV position, the KV memory position is set at 1.

6. **Start engine and let idle.**

7. **Once the engine is running, the tester will display secondary ignition voltage measurement on the 3-Digit Display.**
   When the secondary voltage reading on the three digit display has a decimal point in it. The measurement is being displayed in Kilovolts 1 kilovolt (KV) = 1000 volts. If no decimal point is displayed the voltage is just as it reads For example: a reading of 12.0 indicates a measurement of 12,000 volts and reading of 890 indicates 890 volts.

8. **To store the real-time voltage measurement, press the TEST key.** The current measurement will be stored in the current memory position. If the test key is pressed again the current memory position will updated to the current real-time reading.

9. **Connect the KV Clamp to the next wire being tested.** Generally, it is a good idea to test all cylinders on one side of the engine then test the other side. Refer to the drawing you made indicating test order (see **Step 2**).



10. **Press the UP key to scroll to the next memory position.** The memory position number will be displayed for 5 seconds, then value stored in this slot will show for 5 seconds, then the 3-Digit Display will show the real-time voltage measurement.

11. **Repeat steps 7 to 10 until all cylinders have been checked.**

12. **Use the UP and Down arrow keys to view the stored data.** The memory position number will be displayed for 5 seconds, then value stored in this slot will show for 5 seconds, then the 3-Digit Display will show the real-time voltage measurement. **NOTE:** The voltage readings stored in memory will be lost if the tester is disconnected from power.

13. **Compare like firing type readings.** If voltage measurements, on the same type of firing plugs, varies by more than 5KV, a problem may exist in an ignition coil or other ignition components

ADDENDUM to Manual 2-2255
Please Read First

KM2993 DIS Module/KV Tester
UPDATE SHEETS

Page 14:

Tester / Module Connections

CAUTION: The metal case on certain ignition modules is connected to the ground (GND) circuit. DO NOT allow any leads or jumpers to touch the metal case. This could cause damage to the module or the tester.

NOTE: The illustrations show module connections using the generic all-purpose cable supplied with the KM2993 tester.

To provide fast and convenient hook-ups to many of the common ignition modules shown, the following optional accessory cables with OEM connectors are available for the KM2993 tester, but are sold separately:

GM-1, GM-2, GM-3, GM-4, GM-5, GM-6, GM-7, GM-8, and GM-9

FORD-1, FORD-2, FORD-3, FORD-4, FORD-5, FORD-6, and FORD-7

To order accessory cables, find part numbers on Page 9 of these Update Sheets.

Find the module to be tested from the illustrations to determine if an accessory cable is available, or simply use the all-purpose connector cable and jumpers provided to make the test connections as shown.

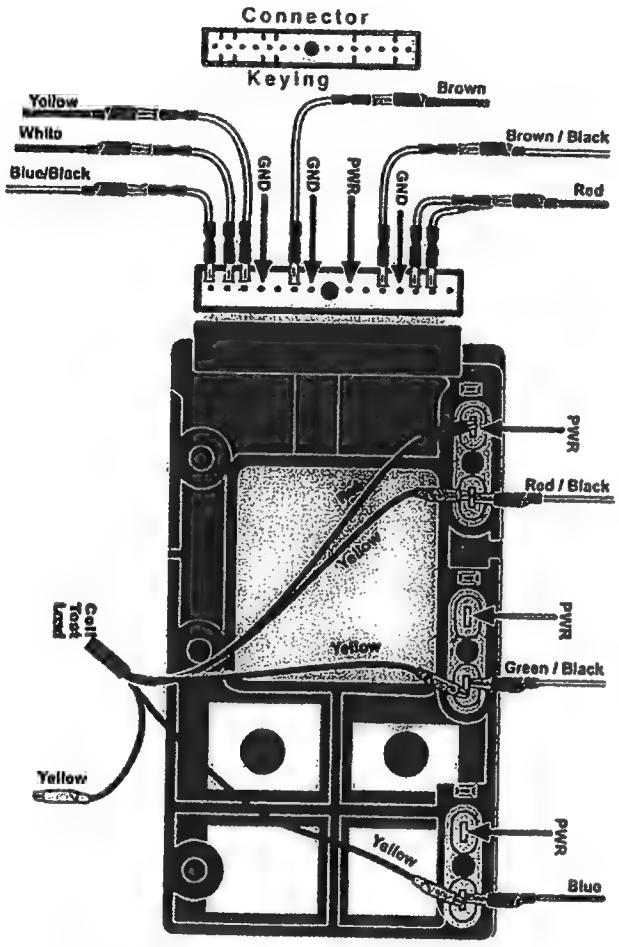
KAL EQUIP®

Printed in USA
0002-002-2307

GM 3.8L C3I

System Type 4 (Optional Cable GM-9)

Use yellow jumper if your tester came with jumpers.



Module was not shown in original manual.

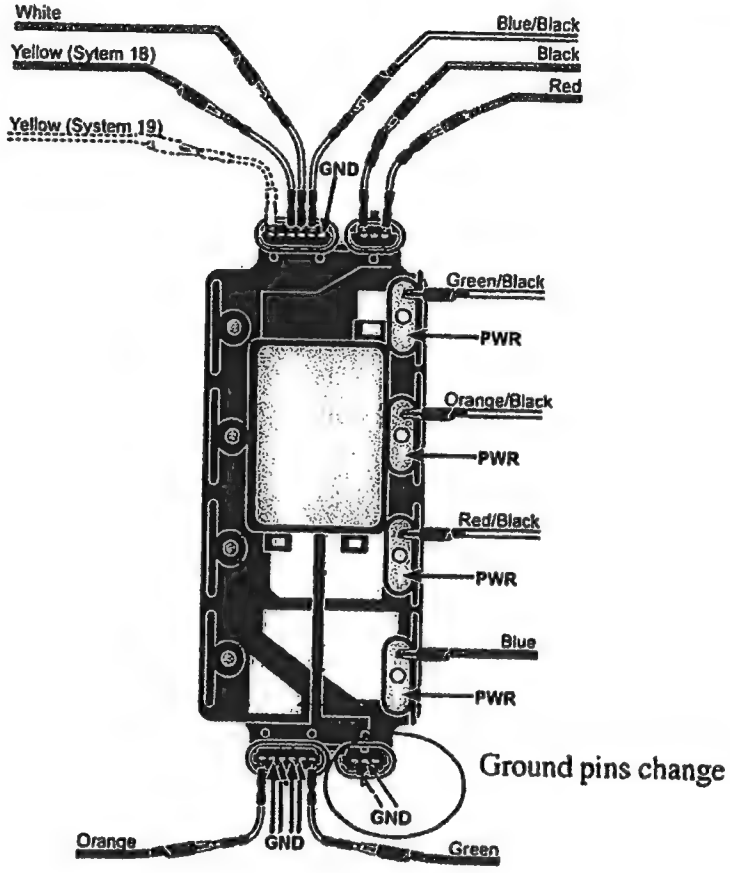
Page 21:

GM 8 Cyl. Northstar **System Type 18 -- Sytem Type 19** (Optional Cable GM-7)

Both Tests must pass for the module to be good.

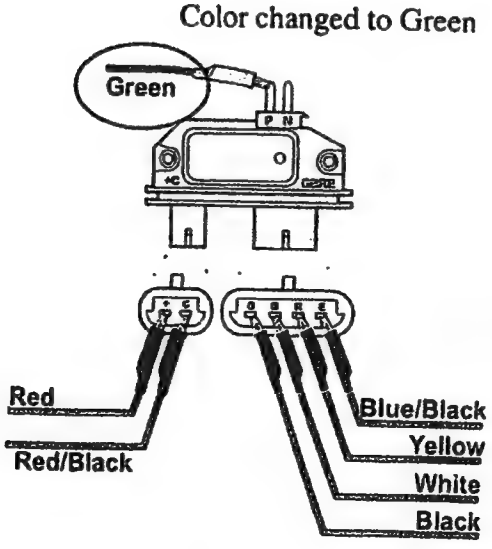
NOTE: When testing with available OEM connector cable (Accessory Cable GM-7, sold separately), connect the centermost yellow wire to its mating cable wire connector provided for System18. Disconnect this wire and connect the outer yellow wire to the same mating connector for System 19.

CAUTION: Do not jerk or pull on wires when disconnecting. To avoid damage to the accessory cable, grasp only the connectors to disconnect them.



Page 23:

GM 8 pin HEI Systems
System Type 13
(Optional Cable GM-1)



GENERAL MOTORS DIS IGNITION APPLICATION

Buick

Model	Engine Application	Engine Code	Model Years	System Type	OEM Accessory Cable*
Century	2.5L	R	92-87	GM DIS/IDIS 4 Cyl	GM-4
Century	2.8L	W	89-87	GM DIS 6 Cyl	GM-6
Century	3.1L	M	96-94	GM DIS 6 Cyl	GM-6
Century	3.3L	N	92-89	GM 3.0/3.3L Buick	GM-9
Century	3.3L	N	93	GM 3.8L C3I (Fast Start)	GM-8
Century	3.8L Delco Type I	3	88-86	GM 3.0/3.3L Buick	GM-9
Century	3.8L Magnavox	3	88-86	GM 3.8L C3I	GM-9
Electra	3.8L	C	91-88	GM 3.8L C3I (Fast Start)	GM-8
Electra	3.8L Delco Type I	3	88-86	GM 3.0/3.3L Buick	GM-9
Electra	3.8L Delco Type I	B	86	GM 3.0/3.3L Buick	GM-9
Electra	3.8L Magnavox	3	88-86	GM 3.8L C3I	GM-9
Electra	3.8L Magnavox Type I	B	86	GM 3.8L C3I	GM-9
LeSabre	3.0L Module # 25520266, 25523220, 25521351	L	86	GM 3.8L C3I	GM-9
LeSabre	3.8L	C	91-88	GM 3.8L C3I (Fast Start)	GM-8
LeSabre	3.8L	L	95-92	GM 3.8L C3I (Fast Start)	GM-8
LeSabre	3.8L Delco Type I	3	88-86	GM 3.0/3.3L Buick	GM-9
LeSabre	3.8L Magnavox	3	88-86	GM 3.8L C3I	GM-9
Park Avenue	3.8L	1	96-95	GM 3.8L C3I (Fast Start)	GM-8
Park Avenue	3.8L	1	92-91	GM 3.8L C3I (Fast Start)	GM-8
Park Avenue	3.8L	C	91-88	GM 3.8L C3I (Fast Start)	GM-8
Park Avenue	3.8L	K	96-95	GM 3.8L C3I (Fast Start)	GM-8
Park Avenue	3.8L	L	94-92	GM 3.8L C3I (Fast Start)	GM-8
Park Avenue	3.8L Magnavox	1	92-91	GM 3.8L C3I (Fast Start)	GM-8
Reatta	3.8L	C	91-88	GM 3.8L C3I (Fast Start)	GM-8
Reatta	3.8L	L	91	GM 3.8L C3I (Fast Start)	GM-8
Regal	2.8L	W	89-87	GM DIS 6 Cyl	GM-6
Regal	3.0L Module # 25520266, 25523220	L	85	GM 3.8L C3I	GM-9
Regal	3.1L	M	96-94	GM DIS 6 Cyl	GM-6
Regal	3.1L	T	93-89	GM DIS 6 Cyl	GM-6
Regal	3.8L	K	96	GM 3.8L C3I (Fast Start)	GM-8
Regal	3.8L	L	95-90	GM 3.8L C3I (Fast Start)	GM-8
Regal	3.8L Magnavox Type I	7	87-86	GM 3.8L C3I	GM-9
Riviera	3.8L Delco Type I	B	86	GM 3.0/3.3L Buick	GM-8
Riviera	3.8L Magnavox Type I	B	86	GM 3.8L C3I	GM-9
Riviera	3.8L	1	95	GM 3.8L C3I (Fast Start)	GM-8
Riviera	3.8L	C	91-88	GM 3.8L C3I (Fast Start)	GM-8
Riviera	3.8L	K	96-95	GM 3.8L C3I (Fast Start)	GM-8
Riviera	3.8L	L	92-91	GM 3.8L C3I (Fast Start)	GM-8
Riviera	3.8L Delco Type I	3	88-86	GM 3.0/3.3L Buick	GM-9
Riviera	3.8L Magnavox	3	88-86	GM 3.8L C3I	GM-9
Skyhawk	2.0L	1	89-87	GM DIS/IDIS 4 Cyl	GM-4
Skylark	3.0L Module # 25520266, 25523220	L	86	GM 3.8L C3I	GM-9
Skylark	2.3L	3	94-92	GM DIS/IDIS 4 Cyl	GM-3
Skylark	2.3L	D	91-88	GM DIS/IDIS 4 Cyl	GM-2
Skylark	2.3L	D	95	GM DIS/IDIS 4 Cyl	GM-3
Skylark	2.5L	U	91-87	GM DIS/IDIS 4 Cyl	GM-4
Skylark	3.0L Module # 25521351	L	88-86	GM 3.8L C3I	GM-9
Skylark	3.1L	M	96-94	GM DIS 6 Cyl	GM-6
Skylark	3.3L	N	92-89	GM 3.0/3.3L Buick	GM-9
Skylark	3.3L	N	93	GM 3.8L C3I (Fast Start)	GM-8
Somerset	2.5L	U	91-87	GM DIS/IDIS 4 Cyl	GM-4
Somerset	3.0L Module # 25520266, 25523220, 25521351	L	88-86	GM 3.8L C3I	GM-9

* Optional Accessory Cables available, but sold separately

Chevrolet

Model	Engine Application	Engine Code	Model Years	System Type	OEM Accessory Cable*
Beretta	2.0L	1	89-87	GM DIS/IDIS 4 Cyl	GM-4
Beretta	2.2L	4	93-92	GM DIS/IDIS 4 Cyl	GM-4
Beretta	2.2L	G	91-90	GM DIS/IDIS 4 Cyl	GM-4
Beretta	2.3L	A	91-90	GM DIS/IDIS 4 Cyl	GM-2
Beretta	2.3L	A	94-92	GM DIS/IDIS 4 Cyl	GM-3
Beretta	2.8L	W	89-87	GM DIS 6 Cyl	GM-6
Beretta	3.1L	M	96-94	GM DIS 6 Cyl	GM-6
Beretta	3.1L	T	93-90	GM DIS 6 Cyl	GM-6
Camaro	3.4L	S	95-93	GM DIS 6 Cyl	GM-6
Camaro	3.8L	K	96-95	GM 3.8L C3I (Fast Start)	GM-8
Cavalier	2.0L	1	89-88	GM DIS/IDIS 4 Cyl	GM-4
Cavalier	2.2L	4	93-92	GM DIS/IDIS 4 Cyl	GM-4
Cavalier	2.3L	4	92	GM DIS/IDIS 4 Cyl	GM-4
Cavalier	2.2L	G	91-90	GM DIS/IDIS 4 Cyl	GM-4
Cavalier	2.3L	D	95	GM DIS/IDIS 4 Cyl	GM-3
Cavalier	2.8L	W	89-87	GM DIS 6 Cyl	GM-6
Cavalier	3.1L	T	94-90	GM DIS 6 Cyl	GM-6
Celebrity	2.5L	R	90-87	GM DIS/IDIS 4 Cyl	GM-4
Celebrity	2.8L	W	89-87	GM DIS 6 Cyl	GM-6
Celebrity	3.1L	T	94-90	GM DIS 6 Cyl	GM-6
Corsica	2.0L	1	89-87	GM DIS/IDIS 4 Cyl	GM-4
Corsica	2.2L	4	93-92	GM DIS/IDIS 4 Cyl	GM-4
Corsica	2.2L	G	91-90	GM DIS/IDIS 4 Cyl	GM-4
Corsica	2.3L	A	94-90	GM DIS/IDIS 4 Cyl	GM-3
Corsica	2.8L	W	89-87	GM DIS 6 Cyl	GM-6
Corsica	3.1L	M	96-94	GM DIS 6 Cyl	GM-6
Corsica	3.1L	T	93-90	GM DIS 6 Cyl	GM-6
Lumina	2.5L	R	92-90	GM DIS/IDIS 4 Cyl	GM-4
Lumina	3.1L	M	95	GM DIS 6 Cyl	GM-6
Lumina	3.1L	T	94-90	GM DIS 6 Cyl	GM-6
Lumina	3.1L	W	93	GM DIS 6 Cyl	GM-6
Lumina	3.4L	X	95-91	GM DIS 6 Cyl	GM-6
Lumina APV	3.8L	L	92	GM 3.8L C3I (Fast Start)	GM-8
Lumina APV	3.8L	L	95-94	GM 3.8L C3I (Fast Start)	GM-8
Lumina APV	3.8L Module 1103911	L	93	GM 3.8L C3I (Fast Start)	GM-8
Lumina APV	3.8L Module 1103936	L	93	GM 3.8L C3I (Fast Start)	GM-8
Monte Carlo	3.1L	M	95	GM DIS 6 Cyl	GM-6
Monte Carlo	3.4L	X	95	GM DIS 6 Cyl	GM-6

Cadillac

Model	Engine Application	Engine Code	Model Years	System Type	OEM Accessory Cable*
All	2.8L	W	88-87	GM DIS 6 Cyl	GM-6
Deville	4.6L Distributorless	9,Y	96-94	GM 8 Cyl. Northstar	GM-7
Concours	4.6L Distributorless	9,Y	96-93	GM 8 Cyl. Northstar	GM-7
Eldorado	4.6L Distributorless	9,Y	96-93	GM 8 Cyl. Northstar	GM-7
Seville	4.6L Distributorless	9,Y	96-93	GM 8 Cyl. Northstar	GM-7

* Optional Accessory Cables available, but sold separately

Oldsmobile

Model	Engine Application	Engine Code	Model Years	System Type	OEM Accessory Cable*
88 Royale	3.8L	K	96-95	GM 3.8L C3I (Fast Start)	GM-8
88 Royale	3.8L	L	94-92	GM 3.8L C3I (Fast Start)	GM-8
88 Royale	3.8L Magnavox Module	L	92	GM 3.8L C3I (Fast Start)	GM-8
98 Regency	3.8L	1	95-92	GM 3.8L C3I (Fast Start)	GM-8
98 Regency	3.8L	K	96-95	GM 3.8L C3I (Fast Start)	GM-8
98 Regency	3.8L	L	94-92	GM 3.8L C3I (Fast Start)	GM-8
98 Regency	3.8L Magnavox Module	L	92	GM 3.8L C3I (Fast Start)	GM-8
Achieva	2.3L	A, D, 3	94-92	GM DIS/IDIS 4 Cyl	GM-3
Achieva	3.1L	M	96-94	GM DIS 6 Cyl	GM-6
Achieva	3.3L Module # 1103911	N	93	GM 3.8L C3I (Fast Start)	GM-8
Achieva	3.3L Module # 1103936	N	93	GM 3.8L C3I (Fast Start)	GM-8
All	2.0L	1	88-87	GM DIS/IDIS 4 Cyl	GM-4
All	2.3L	A, D	91-87	GM DIS/IDIS 4 Cyl	GM-2
All	2.5L	R	92-87	GM DIS/IDIS 4 Cyl	GM-4
All	2.5L	U	91-87	GM DIS/IDIS 4 Cyl	GM-4
All	2.8L	W	89-88	GM DIS 6 Cyl	GM-6
All	3.0L Module # 25520266, 25523220, 25521351	L	86-85	GM 3.8L C3I	GM-9
All	3.1L	T	93-90	GM DIS 6 Cyl	GM-6
All	3.3L	N	92-89	GM 3.0/3.3L Buick	GM-9
All	3.8L	C	91-88	GM 3.8L C3I (Fast Start)	GM-8
All	3.8L Delco Type I	3	88-87	GM 3.0/3.3L Buick	GM-9
All	3.8L Delco Type I	3, B	86	GM 3.0/3.3L Buick	GM-9
All	3.8L Magnavox Type module	3, B	88-86	GM 3.8L C3I	GM-9
Aurora	4.0L	C	96-95	GM 8 Cyl. North Star	GM-7
Cutlass Cruiser	3.1L	M	95	GM DIS 6 Cyl	GM-6
Cutlass	3.1L	M	96	GM DIS 6 Cyl	GM-6
Cutlass	3.4L	X	96-94	GM DIS 6 Cyl	GM-6
Cutlass Ciera	2.2L	4	93	GM DIS/IDIS 4 Cyl	GM-4
Cutlass Ciera	2.8L	W	87	GM DIS 6 Cyl	GM-6
Cutlass Ciera	3.1L	M	96-94	GM DIS 6 Cyl	GM-6
Cutlass Ciera	3.3L	N	93	GM 3.8L C3I (Fast Start)	GM-8
Cutlass Supreme	3.1L	M	95-93	GM DIS 6 Cyl	GM-6
Cutlass Supreme	3.4L	X	95-90	GM DIS 6 Cyl	GM-6
Firenza	2.8L	W	87	GM DIS 6 Cyl	GM-6
Ninety-Eight	3.8L	L	91	GM 3.8L C3I (Fast Start)	GM-8
Silhouette	2.3L Export	D	96-93	GM DIS/IDIS 4 Cyl	GM-3
Silhouette	3.8L	L	92	GM 3.8L C3I (Fast Start)	GM-8
Silhouette	3.8L	L	95-94	GM 3.8L C3I (Fast Start)	GM-8
Silhouette	3.8L Module # 1103911	N	93	GM 3.8L C3I (Fast Start)	GM-8
Silhouette	3.8L Module # 1103936	L	93	GM 3.8L C3I (Fast Start)	GM-8
Silhouette	3.4L	E	96	GM DIS 6 Cyl	GM-6
Toronado	3.8L	L	92-91	GM 3.8L C3I (Fast Start)	GM-8

* Optional Accessory Cables available, but sold separately

Pontiac

Model	Engine Application	Engine Code	Model Years	System Type	OEM Accessory Cable*
6000	3.1L	T, V	93-88	GM DIS 6 Cyl	GM-6
All	2.3L	A, D	91-87	GM DIS/IDIS 4 Cyl	GM-2
All	2.5L	R	90-87	GM DIS/IDIS 4 Cyl	GM-4
All	2.5L	U	91-87	GM DIS/IDIS 4 Cyl	GM-4
All	2.8L	W	89-87	GM DIS 6 Cyl	GM-6
All	3.0L Magnavox # 25520266, 25523220	L	86-85	GM 3.8L C3I	GM-9
All	3.0L Magnavox # 2552135, 25526449	L	87-86	GM 3.8L C3I	GM-9
All	3.8L Magnavox Type I	3	88-87	GM 3.8L C3I	GM-9
All	3.8L w/Delco Type I	3	88-87	GM 3.0/3.3L Buick	GM-9
Bonneville	3.8L	1	96-93	GM 3.8L C3I (Fast Start)	GM-8
Bonneville	3.8L	C	91-88	GM 3.8L C3I (Fast Start)	GM-8
Bonneville	3.8L	K	96-95	GM 3.8L C3I (Fast Start)	GM-8
Bonneville	3.8L	L	95-93	GM 3.8L C3I (Fast Start)	GM-8
Bonneville	3.8L Delco Module	L, 1	92	GM 3.8L C3I (Fast Start)	GM-8
Bonneville	3.8L Magnavox Module	L, 1	92	GM 3.8L C3I (Fast Start)	GM-8
Bonneville	3.8L Module # 1103911	L, 1	92	GM 3.8L C3I (Fast Start)	GM-8
Bonneville	3.8L Module # 1103936	L, 1	92	GM 3.8L C3I (Fast Start)	GM-8
Firebird	3.4L	S	95-93	GM DIS 6 Cyl	GM-6
Firebird	3.8L	K	96-95	GM 3.8L C3I (Fast Start)	GM-8
Grand Am	2.3L	3, A, D	94-90	GM DIS/IDIS 4 Cyl	GM-3
Grand Am	2.3L	D	95	GM DIS/IDIS 4 Cyl	GM-3
Grand Am	3.1L	M	96-94	GM DIS 6 Cyl	GM-6
Grand Am	3.1L	M	93	GM 3.8L C3I (Fast Start)	GM-8
Grand Am	3.3L	N	92	GM 3.0/3.3L Buick	GM-9
Grand Am	3.3L Module # 1103911	N	93	GM 3.8L C3I (Fast Start)	GM-8
Grand Am	3.3L Module # 1103936	N	93	GM 3.8L C3I (Fast Start)	GM-8
Grand Prix	3.1L	M	96-94	GM DIS 6 Cyl	GM-6
Grand Prix	3.1L	T, V	93-88	GM DIS 6 Cyl	GM-6
Grand Prix	3.4L	X	96-91	GM DIS 6 Cyl	GM-6
Sunbird	3.1L	T	93-91	GM DIS 6 Cyl	GM-6
Tempest	2.2L Canada	G	91-90	GM DIS/IDIS 4 Cyl	GM-4
Trans Sport	3.4L	E	96	GM DIS 6 Cyl	GM-6
Trans Sport	3.8L	L	95-94	GM 3.8L C3I (Fast Start)	GM-8
Trans Sport	3.8L Module # 1103911	L	93	GM 3.8L C3I (Fast Start)	GM-8
Trans Sport	3.8L Module # 1103936	L	93	GM 3.8L C3I (Fast Start)	GM-8

Saturn

Model	Engine Application	Engine Code	Model Years	System Type	OEM Accessory Cable*
Saturn	1.9L	7	95-92	GM DIS/IDIS 4 Cyl	GM-5
Saturn	1.9L	9	95-92	GM DIS/IDIS 4 Cyl	GM-5

* Optional Accessory Cables available, but sold separately

FORD MOTOR COMPANY DIS IGNITION APPLICATION

Ford

Model	Engine Application	Model Years	System Type	OEM Accessory Cable*
Contour	2.0L	95-96	Ford EDIS 4 Cyl	FORD-3
Contour	2.5L	95-96	Ford EDIS 4 Cyl	FORD-3
Crown Victoria	4.6L	91-96	Ford EDIS 8 Cyl	FORD-4
Escort	1.9L	91-96	Ford EDIS 4 Cyl	FORD-3
Mustang	2.3L OHC Dual Plug	91-94	Ford DIS 4Cyl Dual Plug	FORD-1
Mustang	3.8L	94-96	Ford EDIS 6 Cyl	FORD-3
Taurus	3.0L SHO	89-95	Ford DIS 6 Cyl	FORD-2
Taurus	3.2L SHO	93-95	Ford DIS 6 Cyl	FORD-2
Taurus	3.0L Flex Fuel	93-95	Ford EDIS 6 Cyl	FORD-3
Thunderbird	3.8L Calif.	94-95	Ford EDIS 6 Cyl	FORD-3
Thunderbird	3.8L Supercharged	89-93	Ford DIS 6 Cyl	FORD-2
Thunderbird	3.8L Supercharged	94-95	Ford EDIS 6 Cyl	FORD-3
Thunderbird	4.6L	94-96	10	FORD-4

Lincoln

Model	Engine Application	Model Years	System Type	OEM Accessory Cable*
Mark VIII	4.6L 4 valve	93-96	Ford EDIS 8 Cyl	FORD-4
Town Car	4.6L	91-96	Ford EDIS 8 Cyl	FORD-4

Mercury

Model	Engine Application	Model Years	System Type	OEM Accessory Cable*
Cougar	3.8L Calif.	94	Ford EDIS 6 Cyl	FORD-3
Cougar	3.8L Supercharged	89-93	Ford DIS 6 Cyl	FORD-2
Cougar	3.8L Supercharged	94-95	Ford EDIS 6 Cy	FORD-3
Cougar	4.6L	94-96	Ford EDIS 8 Cyl	FORD-4
Grand Marquis	4.6L	91-96	Ford EDIS 8 Cyl	FORD-4
Mystique	2.0L	95-96	Ford EDIS 4 Cyl	FORD-3
Mystique	2.5L	95-96	Ford EDIS 4 Cyl	FORD-3
Sable	3.0L Flex Fuel	93-95	Ford EDIS 6 Cyl	FORD-3
Tracer	1.9L	91-96	Ford EDIS 4 Cyl	FORD-3

Truck

Model	Engine Application	Model Years	System Type	OEM Accessory Cable*
Explorer	4.0L	90-94	Ford EDIS 6 Cyl	FORD-3
Ranger	2.3L OHC Dual Plug	89-94	Ford DIS 4Cyl Dual Plug	FORD-1
Ranger	4.0L	90-94	Ford EDIS 6 Cyl	FORD-3

* Optional Accessory Cables available, but sold separately

Appendix: Replacement and Accessory Cable List

Part Number	Description	Availability
1000-000-4590	FG,GM#1 DIS CABLE ADAPTER	Sold separately
1000-000-4591	FG,GM#2 DIS CABLE ADAPTER	Sold separately
1000-000-4592	FG,GM#3 DIS CABLE ADAPTER	Sold separately
1000-000-4593	FG,GM#4 DIS CABLE ADAPTER	Sold separately
1000-000-4594	FG,GM#5 DIS CABLE ADAPTER	Sold separately
1000-000-4595	FG,GM#6 DIS CABLE ADAPTER	Sold separately
1000-000-4596	FG,GM#7 DIS CABLE ADAPTER	Sold separately
1000-000-4597	FG,GM#8 DIS CABLE ADAPTER	Sold separately
1000-000-4598	FG,GM#9 DIS CABLE ADAPTER	Sold separately
1000-000-4599	FG,FORD#1 DIS CBL ADAPTER	Sold separately
1000-000-4600	FG,FORD#2 DIS CBL ADAPTER	Sold separately
1000-000-4601	FG,FORD#3 DIS CBL ADAPTER	Sold separately
1000-000-4602	FG,FORD#4 DIS CBL ADAPTER	Sold separately
1000-000-4603	FG,FORD#5 DIS CBL ADAPTER	Sold separately
1000-000-4604	FG,FORD#6 DIS CBL ADAPTER	Sold separately
1000-000-4605	FG,FORD#7 DIS CBL ADAPTER	Sold separately
1000-000-4606	FG,KV CABLE CLAMP ADAPTER	With Tester
1000-000-4607	FG,MODULE TESTING CABLE	With tester
1000-000-4608	FG,DIS/KV JUMPER WIRES	With tester
0038-000-3150	CABLE,DB15M-DBF15 36" (EXTENDER)	Sold separately

Back Cover:

THREE (3) YEAR LIMITED WARRANTY

Actron Manufacturing Company ("Actron") warrants to the original purchaser that this product will be free from defects in materials and workmanship for a period of three (3) years from the date of original purchase. Any unit that fails within this period will be replaced or repaired at Actron's discretion without charge. If you need to return product, please follow the instructions below. This warranty does not apply to damages (intentional or accidental), alterations or improper or unreasonable use.

DISCLAIMER OF WARRANTY

ACTRON DISCLAIMS ALL EXPRESS WARRANTIES EXCEPT THOSE THAT APPEAR ABOVE. FURTHER, ACTRON DISCLAIMS ANY IMPLIED WARRANTY OF MERCHANTABILITY OF THE GOODS OR FITNESS OF THE GOODS FOR ANY PURPOSE. (TO THE EXTENT ALLOWED BY LAW, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR OF FITNESS APPLICABLE TO ANY PRODUCT IS SUBJECT TO ALL THE TERMS AND CONDITIONS OF THIS LIMITED WARRANTY. SOME STATES DO NOT ALLOW LIMITATIONS ON HOW LONG AN IMPLIED WARRANTY LASTS, SO THIS LIMITATION MAY NOT APPLY TO A SPECIFIC BUYER.)

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TO USE YOUR WARRANTY

If you need to return the unit, please follow this procedure

1. Call Actron Tech Support at (800) 253-9880. Our Technical Service representatives are trained to assist you.
2. Proof of purchase is required for all warranty claims. For this reason we ask that you retain your sales receipt.
3. In the event that product needs to be returned, you will be given a Return Material Authorization number.
4. If possible, return the product in its original package with cables and accessories.
5. Print the RMA number and your return address on the outside of the package and send to the address provided by your Customer Service representative.
6. You will be responsible for shipping charges in the event that your repair is not covered by warranty.

OUT OF WARRANTY REPAIR

If you need product repaired after your warranty has expired, please call Tech Support at (800) 253-9880. You will be advised of the cost of repair and any freight charges.

Replacement Parts and Order Information

Tester components listed in this manual are available directly from Actron.

For information on replacement parts, call: **1-800-253-9880**

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